

Around the World in 80 Days

By Tim Cook

The Premise

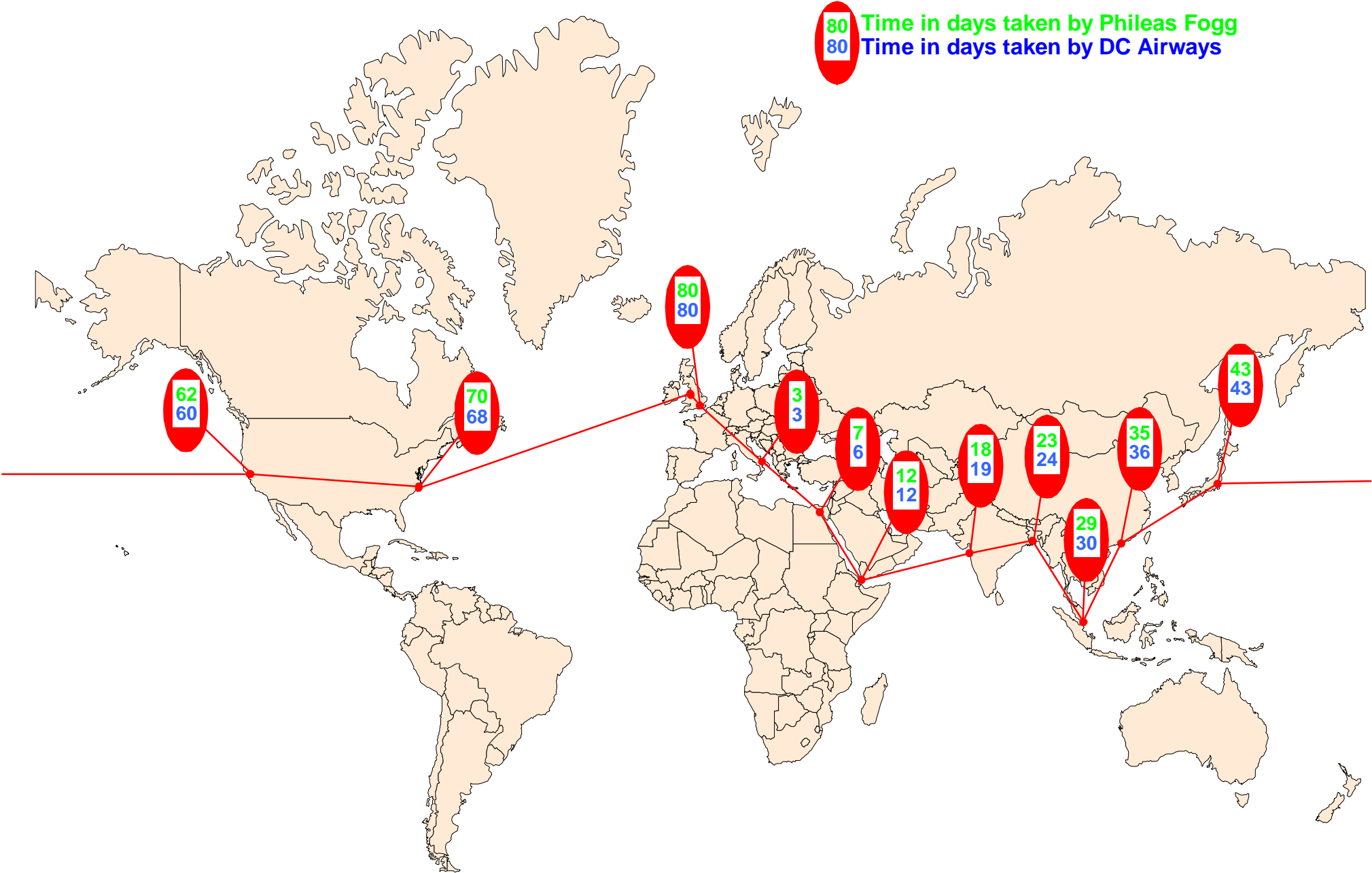
The basic idea is taken from Jules Verne's book *Le Tour du monde en quatre-vingt jours* (Around the World in 80 Days), which was originally published in 1873. This tells the story of how a Victorian English gentleman, Phileas Fogg, accompanied by his French servant, Jean Passepartout, travel around the world in eighty days. Throughout the book they are pursued by a detective Fix, who is convinced that Phileas Fogg is the perpetrator of a daring robbery during which £55,000 were stolen from the Bank of England three days before the trip began.

The original timetable in the book was set out in an article in the Daily Telegraph¹ and Phileas Fogg makes a £20,000 wager with his friends from the Reform club that "*I will make the tour of the world in eighty days or less.*" He promises to return "*On Saturday, the 21st of December, 1872, at a quarter before nine p.m.*"

Having read the book, the millionaire Stephen Hughes has decided, yet again, to charter DC Airways to see if he can travel around the world by DC-3 in eighty days, following a similar route to that used by Phileas Fogg in the book.

¹ From London to Suez via Mont Cenis and Brindisi, by rail and steamboats	7 days
From Suez to Bombay, by steamer	13 days
From Bombay to Calcutta, by rail	3 days
From Calcutta to Hong Kong, by steamer	13 days
From Hong Kong to Yokohama (Japan), by steamer	6 days
From Yokohama to San Francisco, by steamer	22 days
From San Francisco to New York, by rail	7 days
From New York to London, by steamer and rail	9 days
Total	80 days

Map showing basic route and a comparison between the time taken by Phileas Fogg and DC Airways



Wednesday 2nd October

In the book Phileas Fogg started his journey at 8.45 p.m. on Wednesday 2nd October 1872 from the Reform Club in central London. He then travelled by train from Charing Cross to Dover, and reached Paris during the morning of Thursday 3rd October.

Our route follows a similar path, but we follow down the coast of France via Le Touquet and Dieppe to Rouen before turning east towards Paris.

From - To	Flight Description. "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 28	Init. Hdg – 127deg.	Init. Alt – 1,500ft	Apt Elev. – 16ft.			
London City (EGLC) United Kingdom To Paris (LFPO) France	Departure: To Fix 01. Tune Nav1 to LON VOR/DME 113.60 and set the OBS to 093deg. After take off continue on runway heading 278deg and start your short climb to 1,500ft. Keep to the right of the tall building, which is Canary Wharf. You will see St Paul's Cathedral on your right. Waypoint reached when DME reads 12.3NM. Fix 01 is located over the Reform Club in Pall Mall.....				278deg	7.5NM	00+04
	Enroute: To Fix 03. Make a standard rate left turn to 093deg. During the turn, you may see Buckingham Palace in front of you. Follow the OBS needle and aim to pass just to the right of the London Dome. You should shortly see a large power station in front of you – this is the next waypoint when the DME should read 24.4NM.....				093deg	13.1NM	00+06
	To Fix 04. Turn right to 111deg, pass over the Queen Elizabeth II bridge, and head directly for Tilbury docks on the left hand bank. Tune Nav 1 to DET VOR/DME 117.30, and set the OBS to 139deg. Waypoint reached when needle centres.....				111deg	5.5NM	00+02
	To DET. Turn right to 139deg; track the OBS to DET and climb towards 3,500ft.....				139deg	14.3NM	00+06
	To DVR. Turn left to 111deg, tune Nav 1 to DVR VOR/DME 114.95, set the OBS to 111deg and follow the OBS needle to DVR.....				111deg	29.9NM	00+12
	To Fix 05. Turn right to 143deg; tune the ADF to ING 387.0. You will pick up the NDB after a few minutes when you should head towards the NDB. Waypoint reached when DVR DME reads 14.1NM.....				143deg	14.1NM	00+06
	To LT. Turn right to 185deg; tune the ADF to LT 358.0, and follow along the coast to LT.....				185deg	26.8NM	00+11
	To DPE. Turn right to 208deg, tune Nav 1 to DPE VOR 115.80, set the OBS to 208 and follow the OBS needle.....				208deg	40.1NM	00+16
	To Fix 06. Turn left to 189deg and head towards the river Seine at Rouen. Tune Nav 1 to OL VOR/DME 111.20 and set the OBS to 128deg. Waypoint reached when the needle centres.....				189deg	36.8NM	00+15
	To Fix 07. Turn left to 128deg, follow the OBS needle and follow the general course of the river. Tune Nav 2 to PGS VOR/DME 117.05, and set the OBS to 091deg. Waypoint reached when OBS 2 needle centres...				128deg	35.5NM	00+14
	Approach: To Fix 8. Turn left to 091deg, track OBS 2 needle, and start your descent to 1,500ft. Tune Nav 1 to MLN VOR 113.60 and set the OBS to 145deg. Waypoint reached when the OBS 1 needle centres.....				091deg	13.5NM	00+06

A DC-3 Airways Charter by Tim Cook

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	To Fix 9. Turn right to 145deg, shortly after the turn you will see the Eiffel Tower. Tune Nav 2 to MLN VOR 113.60, set the OBS to 145deg and follow the needle. Tune Nav1 to runway 25 ILS 110.90, and set the OBS to 245deg. You will be heading directly over Notre-Dame cathedral on island in the centre of the river. To runway – note the very sharp turn to short Finals here. When Nav 2 DME reads 24.7NM, turn right to runway heading 245deg for a visual or ILS approach. Do not get confused by the “crossed” runways that lay to the left of runway 25..... Land – Only runway 25 Length – 11,962ft. Width – 148 ft. Surface – Concrete		145deg	17.2NM	00+08
			245deg	3.8NM	00+02
Flight No. 813-02-00	Arrival Airport Elev. – 291ft.	Estimated totals for this flight>>>		258.1NM	01+48

Thursday 3rd October

In the book Phileas Fogg travelled from Paris to Turin and crossed the Alps via the Mont Cenis pass. The road across the pass was built by Napoleon between 1803 and 1810. The original railway across the Mont Cenis pass, which followed alongside the road, was opened in 1868 but was closed in 1871 following the opening of the railway tunnel.

Our route takes us from Paris to Turin, along the rivers Seine and Loire to the Alps. The Mont Cenis pass was difficult to fly over, so our route takes us over the St Bernard pass and into the Aosta valley instead. Today the Aosta valley is little used, however for millennia it was a well-trodden route. Hannibal and his elephants came this way in the 3rd century BC, and more recently, Napoleon and his armies swept through the region on their way to victory at Marengo.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 25	Init. Hdg – 136deg.	Init. Alt – 3,500ft	Apt Elev. – 291ft.			
Paris (LFPO) France To Turin (LIMF) Italy	Departure: To Fix 02. Tune Nav1 to MLN VOR 113.60. Set the OBS to 184deg. After take off turn left to 136deg, climb to 3,500ft MSL and follow the river Seine. Waypoint reached when the OBS needle centres.....				136deg	30.2NM	00+14
	Enroute: To BIC. Turn right to 184deg, and tune the ADF to BIC 405.0.....				184deg	47.2NM	00+19
	To Fix 03. Turn left to 165deg, and follow the river Loire. Tune Nav 1 to NEV VOR 113.40, and set the OBS to 152deg. Waypoint reached when the needle centres, which is at the confluence of the river Allier...				165deg	39.2NM	00+16
	To MOU. Turn left to 129deg; tune Nav 1 to MOU VOR/DME 116.70 set the OBS to 129deg.....				129deg	28.5NM	00+12
	To MO. Turn left to 119deg and follow the OB (119deg) course from MOU. Tune the ADF to MO 400.0 and head towards the NDB after you receive the signal from MO.....				119deg	54.1NM	00+22
	To BOR. Turn left to 106deg, and start climb towards 5,500ft MSL. Tune the ADF to BOR 423.0.....				106deg	21.2NM	00+09
	To Fix 04. Turn right to 117deg, tune Nav1 to PAS VOR/DME 116.60 and set the OBS to 345deg. Fix is over Meythet aerodrome, where the OBS needle should centre.....				117deg	37.6NM	00+15
	To Fix 05. Turn right to 148deg, head over the lake and continue along the green valley at the end. DME reads 28.1NM at waypoint.....				148deg	13.8NM	00+05
	To Fix 06. Turn right to 165deg and follow the valley round to right. DME reads 32.6NM at waypoint.....				165deg	4.6NM	00+02
	To Fix 07. Turn right to 188deg, commence descent to 4,500ft MSL and follow the valley you can see over the next ridge. DME reads 47.3NM at waypoint.....				188deg	16.2NM	00+06
	To Fix 08. Turn left to 155deg, and continue to follow the valley. DME reads 54.8NM at waypoint.....				155deg	7.7NM	00+03
	To Fix 09. Turn left to 138deg, start a 500FPM climb towards 11,000ft MSL, and continue to follow the valley. DME reads 59.7NM at waypoint.....				138deg	5.5NM	00+02
	To Fix 10. Turn left to 102deg, and continue to follow the valley. DME reads 63.4NM at waypoint.....				102deg	7.1NM	00+03
	To Fix 11. Turn left to 078deg, and continue to follow the valley. DME reads 64.9NM at waypoint.....				078deg	6.7NM	00+03
	To Fix 12. Turn left to 033deg, and continue to follow the valley. DME reads 63.3NM at waypoint.....				033deg	3.3NM	00+01
	To Fix 13. Turn right to 072deg and head up the narrow valley. DME reads 65.5NM at waypoint.....				072deg	8.1NM	00+03
	To Fix 14. Follow the valley round to the left to 036deg and continue to follow the valley.....				036deg	3.2NM	00+01

	To Fix 15. Follow the valley round to the right to 044deg and head over the snowfield towards the saddle to the left of the peak. The ground level of the saddle is 10,000ft.....	044deg	5.6NM	00+02
	To Fix 16. Turn left to 027deg, and head for the narrow valley. Commence a 500FPM descent towards 3,500ft MSL. The triangular peak on the horizon is Mont Blanc (15,780ft or 4,807m).....	027deg	6.6NM	00+02
	To Fix 17. Turn left to 004deg, and continue to follow down the valley. DME reads 57.9NM at waypoint...	004deg	9.0NM	00+03
	To Fix 18. At the end of the valley turn right to 059deg and follow the main valley (ignore the valley going off to the left). DME reads 61.2NM at waypoint.....	059deg	6.7NM	00+03
	To Fix 19. Follow the valley round to the right to 087deg. DME reads 72.6NM at waypoint.....	087deg	12.8NM	00+05
	To Fix 20. Make a sharp right turn to 160deg and follow the valley round to the right.....	160deg	4.0NM	00+02
	To Fix 21. Follow the valley round to the left to 144deg. Tune Nav 2 to CSL VOR/DME 116.75 and set the OBS to 202. Waypoint reached when the needle centres.....	144deg	10.6NM	00+04
	Approach:			
	To CSL. Turn right to 202deg, start your descent to 2,200ft MSL and follow the OBS needle to CSL. Tune the ADF to CAS 357.0, tune Nav 1 to runway 36 ILS 109.50, and set the OBS to 004deg. Slow to 120kts...	202deg	20.9NM	00+09
	To Fix 22. After station passage CSL, turn left to 183deg and fly heading for 2mins 10 secs.....	183deg	4.3NM	00+02
	To runway. Commence a procedure turn. Make a right turn to 228deg and fly Hdg for one minute. Make a left 180deg turn to 048deg when you should be heading directly for CAS ADF. Turn left to runway heading 004deg for a visual or ILS approach.....	Final Hdg 004deg	7.8NM	00+03
	Land – Caselle runway 36 Length – 10,847ft. Width – 197 ft. Surface – Bituminus			
Flight No. 813-02-01	Arrival Airport Elev. – 987ft.	Estimated totals for this flight>>>	422.5NM	02+51

Friday 4th October

In the book, Phileas Fogg travelled directly from Turin to Brindisi by train. However, we will need two days to complete this part of the journey. Today's leg takes us past Genoa, the birthplace of Christopher Columbus (or Cristoforo Colombo) in 1446 or 1451 (no one seems quite sure). We also pass near the Island of Elba where Napoleon Bonaparte was imprisoned by the English from May 1814 until February 1815. He was allowed a personal escort of some 1,000 men, a household staff and was even given the title Emperor of Elba and rule over its 110,000 people. We finally land at Ciampino in Rome after an approach course that takes us across the centre of the city.

From - To	Flight Description. "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 36	Init. Hdg – 128deg.	Init. Alt – 3,500ft	Apt Elev. – 987ft.			
Turin (LIMF) Italy To Rome (LIRA) Italy	Departure: To Fix 01. Tune Nav1 to CSL VOR 116.75. Set the OBS to 128deg. After take off continue on runway heading 004deg until the DME reads 5.0NM.....				004deg	4.0NM	00+02
	Enroute: To Fix 03. Make a standard right turn to 184deg. Waypoint reached when the OBS needle centres.....				184deg	4.5NM	00+02
	To GEN. Turn left to 128deg, start climbing towards 3,500ft, and track the OBS needle from CSL. Tune Nav 2 to GEN VOR/DME 112.80, and when the Nav 2 DME reads 28NM, start climbing towards 5,500ft. When the DME reads 11NM begin descent to 3,500ft.....				128deg	75.5NM	00+31
	To Fix 05. Tune Nav1 to PIS VOR/DME 112.10, set the OBS needle to 128deg and follow the coast. Waypoint reached when the DME reads 7NM.....				128deg	65.5NM	00+27
	To Fix 06. Turn right to 169deg, and follow the coast. Tune Nav 1 to ELB VORTAC 114.70 and set the OBS needle to 019deg. Waypoint reached when the needle centres.....				169deg	49.1NM	00+20
	To TAQ. Turn left to 128deg, and follow the coast. Tune Nav 1 and 2 to TAQ VOR/DME 111.80 and set the Nav 1 OBS needle to 128deg.....				128deg	70.1NM	00+28
	Approach: To Fix 07. Turn left to 119deg, and tune the ADF to CIA 412.0. Tune Nav1 to runway 15 ILS 109.90, and set the OBS to 152deg. Head towards CIA and when the Nav 2 DME reads 24NM start your descent to 1,500ft. You will pass over the centre of Rome and should see St Peters Cathedral, and the Coliseum in front of you.....				119deg	41.6NM	00+17
	To runway. When you can see the runway out of the right front window, turn right to runway heading 152deg for a visual or ILS approach. Watch out for the disused runway on your left..... Land – Ciampino runway 15 Length – 7,202ft. Width – 148 ft. Surface – Macadam				152deg	4.3NM	00+02
Flight No. 813-02-02	Arrival Airport Elev. – 426ft.				Estimated totals for this flight>>>		
						314.6NM	02+09

Saturday 5th October

This leg takes us to Brindisi. After take off we follow along the coast. Before turning inland you will see the bay of Naples in front of you, and the island of Capri in the distance. Watch the paintwork as you fly over Mt Vesuvius!

Phileas Fogg also arrived at Brindisi on 5th October thus, so far, we have kept pace with each other.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 15	Init. Hdg – 134deg.	Init. Alt – 3,500ft	Apt Elev. – 426ft.			
Rome (LIRA) Italy To Brindisi (LIBR) Italy	Departure: To LAT. Tune the ADF to LAT 379.0. After take off turn left to 134deg, and head towards LAT.....				134deg	23.4NM	00+11
	Enroute: To Fix 02. Tune Nav 1 to SOR VOR/DME 112.20 and set the OBS needle to 131deg. Follow the needle towards SOR. Tune Nav 2 to BAR VOR/DME 116.40 and set the OBS to 078deg. Waypoint reached when the Nav 1 DME reads 17.7NM, and the Nav 2 needle centres.....				131deg	66.9NM	00+27
	To BAR. Turn left to 078deg and head towards Vesuvius and BAR and start to climb towards 5,500ft ASL. When Nav 2 DME reads 55NM commence descent to 3,500ft ASL.....				078deg	125.6NM	00+51
	To BRD. Tune the ADF to BRD 363.5. Turn right to 118deg and head towards BRD. Tune Nav 1 to runway 32 ILS 109.50, and set the OBS to 316deg. Commence your descent to 2,000ft ASL and slow to 120kts when you can see Casale Mil aerodrome in front of you.....				118deg	64.6NM	00+26
	Approach: To Fix 04. Turn right to runway reciprocal 136deg and fly Hdg for one minute.....				136deg	2.0NM	00+01
	To runway. Commence a procedure turn. Make a right 45deg turn to 181deg and fly Hdg for one minute. Make a left 180deg turn to 001deg. When you can see the runway turn left to runway Hdg 316deg for a visual or ILS approach				Final Hdg 316deg	11.6NM	00+06
Land –Casale Mil runway 32 Length – 8,622ft. Width – 148 ft. Surface – Asphalt							
Flight No. 813-02-03	Arrival Airport Elev. – 49ft.				Estimated totals for this flight>>>		294.1NM 02+02

Sunday 6th October

In the book, Phileas Fogg travelled by steamer directly from Brindisi to Suez. However, on this leg our route takes us over the Ionian Sea to make landfall over the island of Kefallina before heading over the northern coastline of the Gulf of Corinth. The approach over the city of Athens gives a good view of the Parthenon, which was built between 447BC and 433BC to house a 40ft high gold and ivory statue of the goddess Athena. In 1687 the Turks used the Parthenon as a powder magazine during the bombardment of the Acropolis, and a shell caused the explosion that destroyed most of the temple.

From - To	Flight Description. "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 32	Init. Hdg – 122deg.	Init. Alt – 3,500ft	Apt Elev. – 49ft.			
Brindisi (LIBR) Italy To Athens (LGAT) Greece	Departure: To BRD. Tune Nav 1 to BRD VORTAC 113.20, and set the OBS needle to 122deg. After take off make a left standard turn to 122deg and start your climb towards 3,500ft.....				122deg	11.0NM	00+06
	Enroute: To GAR. Continue on 122deg, until the DME reads 72NM. Tune Nav 1 to GAR VOR/DME 108.80, and head towards the VOR. Tune the ADF to PRV 353.0.....				122deg	106.2NM	00+43
	To PRV. Turn right to 134deg and follow the coast until you start to receive PRV, head towards the NDB. Tune Nav 1 to ARX DME 112.40.....				134deg	57.5NM	00+23
	To Fix 03. Tune the ADF to AML 367.0 turn right to 156deg, and head towards the NDB. Fix is when Nav 1 DME reads 33NM.....				156deg	25.2NM	00+10
	To Fix 04. Turn left to 109deg, and head along the coast on your left. Tune the ADF to ELF 418.0. Fix is when Nav 1 DME reads 15NM.....				109deg	28.8NM	00+12
	To Fix 06. Continue to keep the coast on your left and follow it until the ADF picks up ELF. The Nav 1 DME will read approximately 84NM at the waypoint.....				Av C'se 090deg	80.3NM	00+32
	To ELF. Turn to 104deg, and head towards ELF. Tune Nav 1 to KEA VOR/DME 115.00, and set the OBS to 129deg.....				104deg	17.2NM	00+07
	Approach: To Fix 07. Turn right to 129deg, and follow the OBS needle towards KEA. Tune the ADF to KVR 357.0, start your descent to 1,500ft and slow to 120kts. You will see the Parthenon directly in front of you as you pass over the city of Athens. Waypoint reached when KVR bears 153deg.....				129deg	5.6NM	00+02
To KVR. Turn right to 153deg and head towards the NDB.....				153deg	12.5NM	00+06	
To runway. Commence a procedure turn. Make a right 45deg turn to 198deg and fly Hdg for one minute. Make a left 180deg turn to 018deg. When you can see the runway turn left to runway Hdg 333deg for visual approach.....				Final Hdg 333deg	10.5NM	00+05	
Land –Athens runway 33R Length – 11,486ft. Width – 197ft. Surface – Asphalt							
Flight No. 813-02-04	Arrival Airport Elev. – 68ft.				Estimated totals for this flight>>>	354.8NM	02+26

Monday 7th October

Today's leg takes us island hopping over the Greek islands known as the Cyclades. Having flown over Kea, Syros and Paros we get to Santorini. The legend of Atlantis probably has its roots in the destruction of a large island called Strongyle (means "round") in 1450BC. After the explosion, all that was left above the surface of the sea were some segments of its perimeter, which today form the islands of Santorini, Thirasia, and Aspronisi.

Today's flight ends in Crete, whose history combines both mythological and historical stories. Legend has it that the island was the birthplace of Zeus, it was also the home of the Minotaur, a creature with a man's body but a bull's head, who lived in the labyrinth under the palace at Knossos. Daedalus built the labyrinth for King Minos, to hide the Minotaur. After Theseus killed the Minotaur and escaped with the king's daughter, Daedalus was imprisoned as a punishment. However, Daedalus and his son Icarus made their escape from Crete by attaching feathers to a framework to make wings. Icarus flew too close to the sun and perished, however Daedalus flew to Sicily where he built a temple to Apollo, and hung up his wings as an offering to the gods. The explosion which destroyed Strongyle, also created a tidal wave estimated to be around 100m high, which destroyed the palace of Knossos and also did a great deal of damage to the north coast of Crete.

Note that the range of some of the navigation aids is quite low (around 20NM) so you may not pick them up instantly after the previous waypoint.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 33R	Init. Hdg – 146deg.	Init. Alt – 3,500ft	Apt Elev. – 68ft.			
Athens (LGAT) Greece To Kasteli (LGTL) Greece (Crete)	Departure: To KVR. Tune the ADF to KVR 357.0. After take off make a left standard turn to 146deg and head towards KVR. Start your climb towards 3,500ft.....				146deg	11.3NM	00+06
	Enroute: To SUN. Turn left to 121deg, tune the ADF to SUN 319.0 and head towards SUN.....				121deg	16.1NM	00+07
	To KEA. Turn left to 117deg., tune Nav 1 to KEA VOR/DME 115.00, and set the OBS to 116deg.....				117deg	13.8NM	00+06
	To SYR. Turn left to 102deg, tune the ADF to SYR 417.0 and head towards SYR.....				102deg	32.0NM	00+13
	To PAO. Turn right to 158deg, tune the ADF to PAO 386.0 and head towards PAO.....				158deg	26.0NM	00+11
	To THR. Turn left to 153deg, tune the ADF to THR 307.0, and head towards THR.....				153deg	40.5NM	00+16
	To IRA. Turn right to 191deg, tune Nav 1 to IRA VOR/DME 108.80, and set the OBS to 191deg.....				191deg	65.2NM	00+26
	Approach: To LGTL. Turn left to 140deg, set the Nav 1 OBS to 140deg and head away from IRA. Commence your descent to 2,500ft when Nav 1 DME reads 8 NM. Slow to 120kts				140deg	11.3NM	00+06
	To Fix 03. After station passage KLI, turn right to runway reciprocal 200deg and fly heading for 2mins.....				200deg	4.0NM	00+02
	To runway. Commence a procedure turn. Make a right 45deg turn to 245deg and fly Hdg for one minute. Make a left 180deg turn to 065deg. When you can see the runway turn left to runway Hdg 020deg for visual approach.....				Final Hdg 020deg	8.5NM	00+04
Land – Kasteli AB runway 2 Length – 8,038ft. Width – 164ft. Surface – Asphalt							
Flight No. 813-02-05	Arrival Airport Elev. – 1,181ft.		Estimated totals for this flight>>>			228.7NM	01+37

Tuesday 8th October

In the book Phileas Fogg arrived in Suez on October 9th, so we are now one day ahead of him. Phileas Fogg was met in Suez by Detective Fix who believed that Fogg was the man who robbed the Bank of England. However, Fix did not have an arrest warrant and is therefore compelled to join the ship and travel on with Fogg to Bombay.

Around the World in Eighty Days is not the only book written by Jules Verne in which the characters cross the Isthmus of Suez. In 20,000 leagues Under the Sea (written by Verne in 1869) captain Nemo and his submarine, the Nautilus, pass through a submarine tunnel from the Red Sea to the Mediterranean.

The town of Suez is situated at the end of the Suez Canal. From an inscription on the temple at Karnak, it would appear that the original canal existed in the time of Seti I (1380 BC). More recently, in 1798, Bonaparte ordered the isthmus to be surveyed as a preliminary to the digging of a canal across it. However, the engineer he employed concluded that there was a difference in level of 29 ft. between the Red Sea and the Mediterranean and the project was abandoned. When the Société d'Etudes pour le Canal de Suez, headed by Ferdinand de Lesseps, surveyed the isthmus in 1846 they found no difference in levels. Construction of the modern canal started on 25th of April 1859, and after an expenditure of 432,807,882 francs, the canal was opened on 16th October 1869.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 2	Init. Hdg – 001deg.	Init. Alt – 3,500ft	Apt Elev. – 1,181ft.			
Kasteli (LGTL) Greece (Crete) To Port Said (HEPS) Egypt	Departure: To Fix 02. Tune Nav 1 to IRA VOR/DME 108.80, and set the OBS to 098deg. After take off turn left to 001deg and start your climb towards 3,500ft. Waypoint reached when the Nav 1 OBS needle centres.....				001deg	8.3NM	00+04
	Enroute: To Fix 03. Turn right to 098deg and follow the 098 radial OB IRA. Tune Nav 2 to SIT VOR/DME 113.30 and set the OBS to 123deg. Waypoint is when Nav 2 OBS needle centres..... To SIT. Turn right to 123deg and head towards SIT..... To PSD. Tune Nav 1 to PSD VOR/DME 112.70 and set the OBS needle to 123deg. Head out over the Mediterranean following the 123 OB radial from SIT. There is a gap of about 30NM between losing the signal from SIT and picking up the signal from PSD. Commence your descent to 1,400ft and slow to 120kts when the Nav 1 DME reads 14NM from PSD				098deg 123deg	27.6NM 17.8NM	00+11 00+07
					123deg	379.1NM	02+34
	Approach: To Fix 04. After station passage PSD, turn left to runway reciprocal 103deg and fly heading for 2mins..... To runway. Commence a procedure turn. Make a right 45deg turn to 148deg and fly Hdg for one minute. Make a left 180deg turn to 328deg. When you can see the runway turn left to runway Hdg 283deg for visual approach..... Land – Port Said runway 28 Length – 7,702ft. Width – 148ft. Surface – Asphalt				103deg Final Hdg 283deg	4.0NM 8.8NM	00+02 00+04
Flight No. 813-02-06	Arrival Airport Elev. – 6ft.				Estimated totals for this flight>>>		445.6NM 03+02

Wednesday 9th October

In the book, Phileas Fogg travelled by ship from Suez to Bombay, via Aden. However, as there is an existing charter, which covers the Suez Canal, I have decided to travel from Port Said to Aden via the river Nile.

On this leg, we pass over the Great Pyramid at Gizah, which is about 450ft high, and covers 13 acres. The pyramid was build by the Pharaoh Khufu (better know as Cheops) in the 4th dynasty and took 100,000 men over 20 years to complete. Later we also pass over Saqqara, where we can see the Bent Pyramid, and the Step Pyramid, which dates back to the third Dynasty. The Step pyramid is one of the earliest found, whilst the Bent pyramid demonstrates one of the construction problems associated with some pyramids. To prevent the pyramid collapsing the builders gave the top portion of the pyramid a shallower angle, and hence you get the strange shape of this pyramid. By the way I love the airport code for Asyut considering that it is located in one of the hottest places on earth!

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 28	Init. Hdg – 208deg.	Init. Alt – 2,500ft	Apt Elev. – 6ft.			
Port Said (HEPS) Egypt To Asyut (HEAT) Egypt	Departure: To CAI. Tune Nav 1 to CAI VOR/DME 112.50, and set the OBS to 208deg. Tune Nav 2 to AXD VOR/DME 115.90, and set the OBS to 139deg. After take off turn left to 208deg and start your climb towards 2,500ft and head towards CAI.....				208deg	81.8NM	00+35
	Enroute: To Fix 02. Turn right to 233deg, reset the Nav 1 OBS to 233 and follow the OBS needle. After a few minutes you will see the Pyramids at Gizah in front of you. Waypoint is when Nav 2 OBS needle centres....				233deg	20.6NM	00+08
	To Fix 03. Turn left to 139deg, and follow the Nav 2 OBS needle. Start your descent to 1,500ft and after a few minutes you will see the pyramids at Saqqara. Continue on this course until you reach the river Nile.....				139deg	15.0NM	00+06
	To Fix 06. Turn right and follow the river Nile, whilst climbing to 2,500ft. There are a number of twists and turns, but they should be fairly easy to follow. Tune Nav 1 to AST VOR/DME 117.70 and set the OBS needle to 166deg. Waypoint is when the needle centres.....				Av C'se 195deg	97.1NM	00+40
	To AST. When the OBS needle centres, turn left to 166deg, commence your climb to 3,500ft, and head towards AST. Commence your descent to 2,500ft, and slow to 120kts when the DME reads 6 NM.....				166deg	74.0NM	00+31
	Approach: To Fix 07. After station passage AST, turn left to runway reciprocal 128deg and fly heading for 2mins... To runway. Commence a procedure turn. Make a right 45deg turn to 173deg and fly Hdg for one minute. Make a left 180deg turn to 353deg. When you can see the runway turn left to runway Hdg 308deg for visual approach.....				128deg Final Hdg 308deg	4.0NM 10.0	00+02 00+05
	Land – Asyut Intl runway 31 Length – 9,911ft. Width – 148ft. Surface – Asphalt						
Flight No. 813-02-07	Arrival Airport Elev. – 770ft.				Estimated totals for this flight>>>		302.5nm 02+07

Thursday 10th October

Today's leg takes us past Luxor and on to Aswān. Luxor (originally called Thebes) contains the impressive Luxor Temple, which was started by Amenophis III in about 1350BC but was added to after his lifetime. The grand entrance to the temple is guarded by majestic statues of Rameses (or Ramses) II. It was originally also flanked by a pair of obelisks, of which only one remains. The other was presented to France by Mohammed Ali (no not that one!) in 1831 and is now in the Place de la Concorde in Paris. Near Luxor is the Valley of the Kings, which contains the tomb of Tutankhamen.

The original dam at Aswān was completed in 1902 by British engineers. Construction on the modern (High Dam) started in 1960, and was completed in 1971 at an estimated cost of more than \$1 billion. The dam is 365ft (111 m), extends for 11,800ft (3,600 m) across the river and holds back a lake (Lake Nasser) that is more than 300 miles (480 km) long and 10 miles (16 km) wide. The 12 Soviet-built turbines can generate 2,100 megawatts of electricity.

From - To	Flight Description. "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 31	Init. Hdg – 128deg.	Init. Alt – 3,500ft	Apt Elev. – 770ft.			
Asyut (HEAT) Egypt To Aswan (HESN) Egypt	Departure: To Fix 03. Tune Nav 1 to AST VOR/DME 117.70 and set the OBS needle to 098deg. After take off make a standard rate 180deg right turn to 128deg and start your climb towards 3,500ft. Waypoint reached when the OBS needle centres.....				128deg	8.8NM	00+04
	Enroute: To Fix 04. Turn right to 098deg and follow the OBS needle to the river..... To Fix 14. Turn right and follow the river Nile. There are a number of twists and turns, but they should be fairly easy to follow. Tune Nav 1 to ASN VOR/DME 112.30 and set the OBS needle to 324deg. The waypoint is directly over the Aswan dam (DME reads 3.5NM).....				098deg Av C'se 154deg	17.0NM 246.2NM	00+07 01+40
	Approach: To Fix 15. Turn left to 169deg, and start your descent to 2,500ft. Waypoint reached when the OBS needle centres..... To Fix 16. Turn right to 259deg, tune Nav1 to runway 35 ILS 109.50, and set the OBS to 349deg..... To runway. As the ILS needles centre, turn right to 349deg for either a visual or ILS approach..... Land – Aswan Intl runway 35 Length – 11,198ft. Width – 148ft. Surface – Asphalt				169deg 259deg 349deg	7.9NM 3.3NM 6.2NM	00+04 00+02 00+03
Flight No. 813-02-08	Arrival Airport Elev. – 662ft.		Estimated totals for this flight>>>			289.4NM	02+00

Friday 11th October

Today we pass over part of Lake Nasser. The rising waters that followed the building of the Aswan dam threatened to cover a number of important archaeological monuments. A number of these, the tomb of the Agha Kahn, and Ramses' (or Ramses') monument to himself, were moved to Abu Simbel. The largest object moved was the entire Philae Temple, which was repositioned under the guidance of the United Nations.

From - To	Flight Description. "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 35	Init. Hdg – 169deg.	Init. Alt – 3,500ft	Apt Elev. – 662ft.			
Aswan (HESN) Egypt To Port Sudan (HSPN) Sudan	Departure: To Fix 03. Tune Nav 1 to ASN VOR/DME 112.30 and set the OBS needle to 114deg. After take off make a standard rate 180deg right turn to 169deg and start your climb towards 3,500ft. Waypoint reached when the OBS needle centres.....				169deg	11.0NM	00+05
	Enroute: To Fix 04. Turn left to 114deg and follow the OBS needle. When you lose the signal from Nav 1 continue on the same heading. Retune Nav 1 to PSD VOR/DME 113.10 and set the OBS needle to 134deg. Waypoint reached when you cross the coast.....				114deg	248.5NM	01+36
	To PSD. Turn right to 171deg, and climb to 7,500ft. You will pick up the VOR after a few minutes. Start your descent to 2,000ft and slow to 120kts when the DME reads 38NM.....				171deg	162.7NM	01+02
	Approach: To Fix 06. Tune Nav1 to runway 35 ILS 110.30, and the OBS to 346deg. After station passage PSD, turn left to runway reciprocal 166deg and fly heading for 2mins.....				166deg	4.0NM	00+02
	To runway. Commence a procedure turn. Make a right 45deg turn to 211deg and fly Hdg for one minute. Make a left 180deg turn to 031deg. When you can see the runway turn left to 346deg for either a visual or ILS approach..... Land – Port Sudan runway 35 Length – 8,232ft. Width – 148ft. Surface – Asphalt				Final Hdg 346deg	10.7NM	00+06
Flight No. 813-02-09	Arrival Airport Elev. – 137ft.		Estimated totals for this flight>>>			436.9NM	02+51

Saturday 12th October

The Red Sea is formed by a line of fracture, probably dating from Pliocene times. The high temperature and great relative humidity make the summer climate of the Red Sea one of the most disagreeable in the world. It is surrounded by exceedingly hot and dry deserts and steppes, and the summer water temperature exceeds 85°F (29°C). The high sea temperature and lack of sea currents mean that the water has a high salt content.

The origin of this name (Red Sea) is uncertain. Some think it is derived from the red colour of the mountains on the western shore; others from the red coral found in the sea. Most sources attribute the name to the red appearance sometimes given to the water because of a type of algae called *Trichodesmium erythraeum*, which is found in the sea. When these blooms of algae die off, they appear to turn the blue-green colour of the ocean to a reddish-brown.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 35	Init. Hdg – 088deg.	Init. Alt – 3,500ft	Apt Elev. – 137ft.			
Port Sudan (HSPN) Sudan To Massawa (HHMS) Eritrea	Departure: To Fix 02. After take off make a right turn to 088deg and head towards the Red Sea.....				088deg	5.5NM	00+03
	Enroute: To Fix 03. When you are approaching the sea turn right to 161deg and follow the coast. Start your climb towards 3,500ft, and tune the ADF to MS 230.0.....				161deg	44.3NM	00+18
	To Fix 04. Turn left to 122deg and continue to follow the coast.....				122deg	72.5NM	00+29
	To MS. Turn right to 160deg and continue to follow the coast. Tune Nav 1 to ASM VOR/DME 113.70 and set the OBS needle to 220deg. About 40mins after station passage Fix 04 you will pick up the NDB. Slow to 120kts and start your descent to 1,500ft when the Nav 1 OBS needle centres.....				160deg	156.6NM	01+03
	Approach: To Fix 05. After station passage MS, turn to runway reciprocal 158deg and fly heading for 2mins..... To runway. Commence a procedure turn. Make a right 45deg turn to 203deg and fly Hdg for one minute. Make a left 180deg turn to 113deg. When you can see the runway turn left to runway Hdg 338deg for a visual approach..... Land – Massawa runway 34 Length – 6,201ft. Width – 148ft. Surface – Gravel				158deg Final Hdg 338deg	4NM 8.9NM	00+02 00+05
Flight No. 813-02-10	Arrival Airport Elev. – 32ft.				Estimated totals for this flight>>>		291.8NM 02+00

Sunday 13th October

Today's flight takes us down the coast of Eritrea.

The completion of the Suez Canal led Italy as well as Great Britain and France to seek territorial rights on the Red Sea coasts. The purchase of Assab and the neighbouring region, from the sultan Berehan of Raheita for use as a coaling station by the Italian Rubattino Steamship Company, in March 1870, formed the nucleus of Italy's colonial possessions. In July 1882, Assab was declared an Italian colony. On the 1st of January 1890 the various Italian possessions on the coast of the Red Sea were united by royal decree into one province under the title of the Colony of Eritrea—so named after the Erythraeum Mare of the Romans.

The invasion and occupation of Ethiopia beginning in 1935 marked the last chapter in Italian colonial history that ended with the eviction of Italy from the Horn of Africa by the British in 1941. This was followed by years of civil unrest that culminated in Eritrea achieving full independence on May 24th 1993.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 34	Init. Hdg – 158deg.	Init. Alt – 3,500ft	Apt Elev. – 32ft.			
Massawa (HHMS) Eritrea To Assab (HHSB) Eritrea	Departure: To Fix 03. Tune the ADF to MS 230.0. After take off make a standard rate 180deg right turn to 158deg and start your climb towards 3,500ft. Waypoint reached when the RMI reads 298deg.....				158deg	6.3NM	00+03
	Enroute: To Fix 04. Turn left to 118deg and follow the OB (289deg) bearing from MS. After you lose the ADF signal, continue to follow the coastline.....				118deg	114.3NM	00+47
	To SB. Turn right to 136deg, continue to follow the coast and tune the ADF to SB 345.0. When the ADF picks up the NDB head towards SB. Tune Nav 1 to HDH VOR/DME 114.20 and set the OBS needle to 195deg. Commence your descent to 1,500ft and slow to 120kts when the Nav 1 OBS needle centres.....				136deg	126.8NM	00+51
	Approach: To Fix 05. After station passage SB, turn to runway reciprocal 120deg and fly heading for 2mins..... To runway. Commence a procedure turn. Make a left 45deg turn to 075deg and fly Hdg for one minute. Make a right 180deg turn to 255deg. The runway is difficult to see, so turn right to runway heading 300deg, when the SB ADF bears 300deg for a visual approach..... Land – Assab Intl runway 30 Length – 11,483ft. Width – 148ft. Surface – Concrete				120deg Final Hdg 300deg	4.0NM 9.3NM	00+02 00+05
Flight No. 813-02-11	Arrival Airport Elev. – 45ft.				Estimated totals for this flight>>>		260.7NM 01+48

Monday 14th October

Today's flight takes us across the very narrow entrance to the Red Sea, and then on to Aden.

In 1837, a ship under British colours was wrecked near Aden, and the crew and passengers grievously maltreated by the Arabs. An explanation of the outrage being demanded by the Bombay government, the sultan undertook to make compensation for the plunder of the vessel, and also agreed to sell his town and port to the English. Captain Haines of the Indian navy was sent to complete these arrangements, but the sultan's son refused to fulfil the promises that his father had made. A combined naval and military force was thereupon despatched, and the place was captured and annexed to British India on the 16th of January 1839.

When steam navigation was introduced some years later, it became necessary for Britain to have a coaling station on the Red Sea route to India. Aden was chosen as the most suitable location and later became so heavily used as a coal-bunkering facility that it was nicknamed the "Coalhole of the East." Certain mainland areas were purchased by the British between 1868 and 1888, and in 1937 Aden became a British crown colony. Aden became partially self-governing in 1962 and achieved its full independence on 30th November 1967.

At Aden we are again neck and neck with Phileas Fogg.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 30	Init. Hdg – 133deg.	Init. Alt – 3,500ft	Apt Elev. – 45ft.			
Assab (HHSB) Eritrea To Aden (OYAA) Yemen	Departure: To Fix 03. Tune the ADF to SB 345.0. After take off make a standard rate right turn to 133deg and start your climb towards 3,500ft. Waypoint reached when the RMI reads 309deg.....				133deg	13.9NM	00+07
	Enroute: To Fix04. Turn left to 129deg and follow the OB (309deg) bearing from MS. Tune Nav 1 to KRA VOR/DME 112.50 and set the OBS needle to 083deg. Waypoint reached when the OBS needle centres....				129deg	32.2NM	00+14
	To Fix 05. Turn left to 083deg and follow the OBS needle across the Red Sea. Start your descent to 2,200ft when the DME reads 20NM. Waypoint reached when the DME reads 12.0NM.....				083deg	97.4NM	00+40
	Approach: Fix 06. Turn right to 105deg and head towards the hill in front of you. Reset the Nav 1 OBS to 075deg. Waypoint reached when the Nav 1 OBS needle centres..... To runway. Turn left to runway Hdg 076deg for a visual approach..... Land – Aden Intl runway 8 Length – 10,140ft. Width – 148ft. Surface – Asphalt				105deg 076deg	3.5NM 8.3NM	00+02 00+04
Flight No. 813-02-12	Arrival Airport Elev. – 13ft.		Estimated totals for this flight>>>			155.3NM	01+07

Tuesday 15th October

Today we travel North East along the Yemen coastline.

Yemen is unusual in that its borders are not absolutely fixed. Most of Yemen's northern frontier with Saudi Arabia traverses the great desert of the peninsula, the Rub' al-Khali (Empty Quarter), and remains undemarcated, as does the eastern frontier with Oman.

In the ancient world, the states that occupied the area known today as Yemen controlled the supply of such important commodities as frankincense and myrrh and dominated the trade in many other valuable items, such as the spices and medicines of Asia. Because of its fertility as well as its commercial prosperity, Yemen was known in the ancient world as Arabia Felix (Latin for "Fortunate Arabia") to distinguish it from the vast forbidding reaches of Arabia Deserta (Latin for "Desert Arabia").

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 8	Init. Hdg – 069deg.	Init. Alt – 3,500ft	Apt Elev. – 13ft.			
Aden (OYAA) Yemen To Mukalla (OYRN) Yemen	Departure: To KRY. Tune Nav 1 to KRA VOR/DME 112.50 and set the OBS needle to 069deg. Tune the ADF to KRY 400.0. After take off continue on runway heading 076 until station passage KRY.....				076deg	1.9NM	00+01
	Enroute: To Fix01. Turn left to 053deg, waypoint reached when the OBS needle centres.....				053deg	1.2NM	00+01
	To Fix 02. Turn right to 069deg and follow the OBS needle. Tune Nav 2 to RIN VOR/DME 116.00 and set the OBS needle to 061deg. Waypoint reached when Nav 2 OBS needle centres.....				069deg	135.5NM	01+00
	To Fix 03. Turn left to 061deg, follow the Nav 2 OBS needle and start to climb towards 5,500ft. Start your descent to 2,000ft when Nav 2 DME reads 38NM.....				061deg	120.4NM	00+49
	Approach: To runway. Continue on runway Hdg 061deg for a visual approach.....				061deg	8.0NM	00+04
	Land – Riyan runway 6 Length – 9,810ft. Width – 148ft. Surface – Asphalt						
Flight No. 813-02-13	Arrival Airport Elev. – 52ft.		Estimated totals for this flight>>>			268NM	01+55

Wednesday 16th October

Oman is a rural, agricultural country, with fishing and overseas trading important for the coastal populations. Before 1970, thousands of Omanis left the country to find work in nearby oil-producing states. Oil in commercial quantities was discovered in Oman in 1964, however, and was first exported in 1967. Subsequently, the production of oil rapidly came to dominate the country's economy. By the early 1990s, oil represented one-third of the gross domestic product and provided about 80 percent of the government's income.

The coastal fringe of Dhofar and Salalah is touched by the winds of the southwest monsoon between June and September. The surface winds encourage an up welling of colder waters in the Indian Ocean, which cool the over-lying moisture-laden air. As this air is lifted over the coastal mountains, the moisture condenses as thick fogs over the hills, which support an annual resurgence of many herbs, grasses and trees. Salalah depends for its water supply on annual replenishment by these fogs.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 6	Init. Hdg – 059deg.	Init. Alt – 7,500ft	Apt Elev. – 52ft.			
Mukalla (OYRN) Yemen To Salalah (OOSA) Oman	Departure: To RIN. Tune Nav 1 to RIN VOR/DME 116.00 and set the OBS needle to 059deg. After take off continue on runway heading 061deg, and start your climb towards 7,500ft.....				061deg	1.9NM	00+01
	Enroute: To GDA. Turn left to 059deg, and track the OB OBS needle. Tune the ADF to GDA 354.0 and when the ADF picks up the NDB head towards GDA.....				059deg	184.3NM	01+13
	To SAN. Turn right to 065deg and follow the OB (245deg) bearing from GDA. Tune Nav 2 to SLL VOR/DME 112.30. When the Nav 2 DME reads 70.0NM retune the ADF to SAN 310.0 and head towards SAN. When you are clear of the mountains (DME reads 30.0NM) commence your descent to 1,500ft and slow to 120kts.....				065deg	121.6NM	00+47
	Approach: To Fix 01. After station passage SAN, turn to runway reciprocal 070deg and fly heading for 2mins 30 secs. Tune Nav1 to runway 25 ILS 110.10, and the OBS to 250deg. Tune the ADF to LOM 407.0..... To runway. Commence a procedure turn. Make a right 45deg turn to 115deg and fly Hdg for one minute. Make a left 180deg turn to 295deg, and head towards LOM. When you reach LOM, turn left to runway Hdg 250deg for either a visual or ILS approach..... Land – Salalah runway 25 Length – 9,810ft. Width – 148ft. Surface – Asphalt				070deg Final Hdg 250deg	5.2NM 9.4NM	00+03 00+05
Flight No. 813-02-14	Arrival Airport Elev. – 52ft.				Estimated totals for this flight>>>		322.4NM 02+09

Thursday 17th October

For many years, Masirah was the home of the BBC's British Eastern Relay Station (BERS) where BBC programmes were broadcast to the eastern Gulf and the sub-continent on medium and short wave. The BBC station has been closed down now, and moved to the mainland.

The RAF first became interested in Masirah in 1929 when they established an un-manned staging post on the island. Over the next ten years, a more permanent, but still very modest, presence was established before a larger airfield was developed during the Second World War for anti-submarine operations and as an important staging post to the Far East. Post war, the base was steadily enlarged and for over twenty years, it remained an important staging post for the Far East route. The RAF finally left the island in 1977 when the airfield was returned to the Sultan of Oman for development as a fighter and training base for the expanding Royal Air Force of Oman and it remains an important military airfield to this day.

From - To	Flight Description. "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 25	Init. Hdg – 044deg.	Init. Alt – 5,500ft	Apt Elev. – 52ft.			
Salalah (OOSA) Oman To Masirah Island (OOMA) Oman	Departure: To MRL. Tune Nav 1 to MRL VOR/DME 114.30 and set the OBS needle to 044deg. After take off make a standard rate right turn to 044deg and start your climb towards 5,500ft. After you have gained some height, you will start to receive the MRL VOR.....				044deg	95.9NM	00+40
	Enroute: To Fix 03. Turn right to 056deg, and set the OBS needle to 056deg. Follow the OB OBS needle until you lose the VOR signal over the sea. A few minutes after you lose the VOR, you will see the Island of Masirah in front of you. Waypoint is the centre of the island.....				056deg	241.4NM	01+35
	To Masirah Island aerodrome. Turn left to 026deg, commence your descent to 1,500ft and slow to 120kts. Head towards the aerodrome, which is located on a narrow peninsular at the north end of the island.....				026deg	20.5NM	00+10
	Approach: To Fix 04. After station passage OOMA, turn left to runway reciprocal 347deg and fly heading for 2mins. Tune Nav1 to runway 17 ILS 110.50, and the OBS to 167deg.....				347deg	4.0NM	00+02
	To runway. Commence a procedure turn. Make a right 45deg turn to 032deg and fly Hdg for one minute. Make a left 180deg turn to 212deg. When you can see the runway turn left to runway Hdg 167deg for either a visual or ILS approach..... Land – Masirah Island runway 17 Length – 10,005ft. Width – 148ft. Surface – Asphalt				Final Hdg 167deg	8.8NM	00+05
Flight No. 813-02-15	Arrival Airport Elev. – 65ft. Estimated totals for this flight>>>					370.6NM	01+32

Friday 18th October

Today we fly over the straits of Hormuz to Gwadar, which is in Baluchistan, a province of Pakistan. Originally a loose tribal confederation, Baluchistan was later divided into four principalities that were sometimes under Persian and sometimes under Afghan rule. In the 19th century, British troops tried to subdue the inhabitants until a treaty in 1876 gave them autonomy in exchange for British army outposts along the Afghan border and on some strategic roads. Following the partition of India in 1947, the Khan of Kalat declared Baluchistan independent. However, the insurrection was crushed by the new Pakistani army after eight months of fighting. Three rebellions followed, the last being from 1973 to 1977, when 3,300 Pakistani soldiers and some 6,000 Baluch were killed.

Currently a deep-water port is being constructed at Gwadar to load oil into tankers from a 1,500km pipeline, which runs from Turkmenistan's Daulatabad gas fields. The scheme was first approved in 1995. However, no secure international funding could be secured, initially because of political instability in Afghanistan. The project was abandoned in 1998 when a consortium led by the US energy company Unocal, withdrew from the project over fears of being seen to support Afghanistan's then Taliban government. However, the project has been given the go ahead for a second time, and China will finance the project at an estimated cost of \$198M. The China Harbour Engineering Co has been given the job of building the port.

From - To	Flight Description. "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 17	Init. Hdg – 014deg.	Init. Alt – 5,500ft	Apt Elev. – 65ft.			
Masirah Island (OOMA) Oman To Gwadar (OPGD) Pakistan	Departure: To SUR. Tune Nav 1 to SUR VOR/DME 117.50 and set the OBS needle to 014deg. After take off make a standard rate left turn to 014deg and start your climb towards 5,500ft. After a few minutes you will start to receive the SUR VOR.....				014deg	121.1NM	00+50
	Enroute: To JI. Turn right to 039deg. Tune Nav 1 to JI VOR/DME 112.70 and set the OBS needle to 039deg.....				039deg	198.2NM	01+18
	Approach: To Fix 03. Turn right to 072deg and set the OBS needle to 072deg, and follow the OB course from JI. Start your descent to 1,500ft.....				072deg	25.5NM	00+10
	To runway. When you can see the runway in front of you, turn left to runway Hdg 060deg for a visual approach to runway 6..... Land – Gwadar Intl runway 6 Length – 5,030ft. Width – 75ft. Surface – Bituminus				060deg	5.0NM	00+02
Flight No. 813-02-16	Arrival Airport Elev. – 95ft.				Estimated totals for this flight>>>		349.8NM 02:20

Saturday 19th October

Today's leg takes us to Karachi, which although not the capital, is the largest city of Pakistan with a population (1998 census) of nearly 10 million people. Karachi is the location of the Quaid - E - Azam Mausoleum, which is the tomb of Quaid – E – Azam Muhammad Ali Jinnah.

Jinnah was born in Karachi on December the 25th 1876, studied law in England, and was called to the bar at the age of 19. He returned to India, and joined the All India National Congress in 1906, and the All India Muslim League in 1913. However, before long he became convinced that a Muslim homeland on the Indian subcontinent was the only way of safeguarding Muslim interests and the Muslim way of life. Jinnah led the Muslim League with such skill and tenacity that ultimately both the Congress and the British government had no option but to agree to the partitioning of India. Thus, Pakistan emerged as an independent state in 1947. Jinnah took charge as the first Governor General of Pakistan on 14th of August 1947 and died just over a year later on September the 11th, 1948, at Ziarat near Quetta.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 6	Init. Hdg – 086deg.	Init. Alt – 3,500ft	Apt Elev. – 95ft.			
Gwadar (OPGD) Pakistan To Karachi (OPMR) Pakistan	Departure: To PI. Tune the ADF to PI 400.0. After take off turn right to 086deg, start your climb towards 3,500ft and head towards the NDB.....				086deg	55.9NM	00+24
	Enroute: To OR. Turn right to 089deg and follow the OB (269deg) course from PI. 14mins after station passage PI tune the ADF to OR 380.0, and head towards the NDB.....				089deg	67.2NM	00+27
	To Fix 02. Turn left to 083deg, follow the coastline and tune Nav 2 to MR DME 112.40. Waypoint reached over the mouth of the river Nal (DME reads 85.0NM).....				083deg	47.8NM	00+19
	To Fix 03. Turn right to 108deg. Tune the ADF to MR 354.0, and head towards the NDB.....				108deg	76.2NM	00+31
	To Masroor. When the Nav 2 DME reads 9.5NM turn right to 120deg, commence your descent to 1,500ft, and slow to 120kts. When you can pick out Masroor aerodrome head directly towards it.....				120deg	9.0NM	00+04
	Approach: To Fix 04. After station passage Masroor, turn left to runway reciprocal 090deg and fly heading for 2mins... To runway. Commence a procedure turn. Make a right 45deg turn to 135deg and fly Hdg for one minute. Make a left 180deg turn to 315deg. When you can see the runway turn left to runway Hdg 270deg for a visual approach..... Land – Masroor AB runway 27 Length – 9,000ft. Width – 197ft. Surface – Concrete				090deg Final Hdg 270deg	4.0NM 8.6NM	00+02 00+04
Flight No. 813-02-17	Arrival Airport Elev. – 36ft.				Estimated totals for this flight>>>		268.7NM 01+51

Sunday 20th October

This leg takes us over the delta of the River Indus, which is one of the longest rivers in the world, having a length of 1,800 miles (2,900 kilometres). The river's annual flow is about 272 billion cubic yards (207 billion cubic metres) -- twice that of the Nile and three times that of the Tigris and Euphrates combined. The river's name comes from the Sanskrit word sindhu ("river" or "stream"). It is mentioned in the Rigveda, the earliest (1500 BC) chronicles and hymns of the Aryan peoples of ancient India, and is the source of the country's name.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 27	Init. Hdg – 090deg.	Init. Alt – 3,500ft	Apt Elev. – 36ft.			
Karachi (OPMR) Pakistan To Rajkot (VARK) India	Departure: To Fix 03. Tune the ADF to MR 354.0. After take off make a standard rate 180deg left turn to 090deg, and continue on this heading until the ADF needle shows 316deg.....				090deg	8.1NM	00+04
	Enroute: To Fix 04. Turn right to 136deg, and follow the OB (316deg) bearing from MR. Start your climb towards 3,500 ft. Waypoint is when you lose the MR NDB signal.....				136deg	106.3NM	00+43
	To JMR. Turn left to 125deg, and tune the ADF to JMR 257.0. You will pick up the NDB signal after a few minutes.....				125deg	115.7NM	00+47
	To RK. Turn left to 106deg, and tune the ADF to RK 329.0. When you can see Rajkot start your decent to 2,000ft and slow to 120kts.....				106deg	41.9NM	00+17
	Approach: To Fix 05. After station passage RK, turn left to runway reciprocal 048deg and fly heading for 2mins				048deg	4.0NM	00+02
	To runway. Commence a procedure turn. Make a right 45deg turn to 093deg and fly Hdg for one minute. Make a left 180deg turn to 273deg. When you can see the runway turn left to runway Hdg 228deg for a visual approach.....				Final Hdg 228deg	9.5NM	00+05
Land – Rajkot runway 23 Length – 5,407ft. Width – 151ft. Surface – Tarmac							
Flight No. 813-02-18	Arrival Airport Elev. – 439ft.				Estimated totals for this flight>>>		285.5NM 01+58

Monday 21st October

Today's leg takes us to Mumbai, which was formally known as Bombay, which has one of the highest population densities in the world. In 1981, Greater Bombay had an average of more than 35,000 persons per square mile, whilst some parts of the inner city have nearly one million persons per square mile, perhaps the world's highest density. The mean monthly temperatures vary from 33°C (91°F) in May to 19°C (67°F) in January. The annual rainfall is 71 inches (1,800 millimetres), with an average of 24 inches falling in July alone.

In 1661, Bombay came under British control as part of the marriage settlement between King Charles II and Catherine of Braganza, sister of the king of Portugal. The crown ceded it to the East India Company in 1668. In 1857 the first spinning and weaving mill was established, and by 1860 Bombay had become the largest cotton market in India. The American Civil War (1861-65), and the resulting removal of cotton supplies to Britain, caused a great trade boom in Bombay. With the end of the Civil War, cotton prices crashed. However, by that time the hinterland had been opened, and Bombay had become a strong centre of import trade which, with the opening of the Suez Canal in 1869, meant that Bombay prospered.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 23	Init. Hdg – 114deg.	Init. Alt – 3,500ft	Apt Elev. – 439ft.			
Rajkot (VARK) India To Mumbai (VAJJ) India	Departure: To Fix 01. Tune the ADF to BV 243.0. After take off continue on runway heading 228 for 1 minute.....				228deg	2.0NM	00+01
	Enroute: To BV. Turn left to 112deg, you will pick up the BV NDB about 4 minutes after Fix 01. Start your climb towards 3,500 ft and head for the NDB.....				112deg	85.1NM	00+35
	To DM. Turn right to 156deg and tune the ADF to DM 315.0. You will pick up the NDB signal about 5 minutes after station passage BV.....				156deg	88.5NM	00+36
	To BB. Turn right to 181deg, and tune the ADF to BB 265.0. You will pick up the NDB signal shortly after station passage DM. As soon as you can see an aerodrome in front of you slow to 120kts and commence your descent to 1,500ft. There are two aerodromes here – Juhu is the right hand one				181deg	79.2NM	00+33
	Approach: To Fix 02. Turn left to runway reciprocal 081deg and fly heading for 2mins..... To runway. Commence a procedure turn. Make a right 45deg turn to 126deg and fly Hdg for one minute. Make a left 180deg turn to 306deg. When you can see the runway turn left to runway Hdg 261deg for a visual approach..... Be very careful that you are landing at Juhu and not the international airport. Juhu has no VASI lights, is right by the edge of the sea and lays to the right of Chhatrapati Shivaji Intl Land – Juhu runway 26 Length – 3,749ft. Width – 100ft. Surface – Tarmac				081deg Final Hdg 261deg	4.0NM 9.1NM	00+02 00+05
Flight No. 813-02-19	Arrival Airport Elev. – 9ft.				Estimated totals for this flight>>>		267.9NM 01+52

Tuesday 22nd October

Phileas Fogg and his companions reached Bombay on 20th October, so we are now 1 day behind them. The warrant that Detective Fix needed to arrest Phileas Fogg had not arrived, so yet again, he was forced to follow them as they boarded the train for Calcutta.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 26	Init. Hdg – 074deg.	Init. Alt – 5,500ft	Apt Elev. – 9ft.			
Mumbai (VAJJ) India To Akola (VAAK) India	Departure: Note: It is a short runway at Juhu, so configure the aeroplane for a short-field take off to avoid the building and trees at the end of the runway. To BB. Tune the ADF to BB 265.0. After take off make a standard rate right turn to 074deg, head for BB and start your climb towards 5,500ft.....				074deg	2.9NM	00+02
	Enroute: To AU. Continue on a heading of 074deg, and follow the OB (254deg) bearing from BB for 35 minutes. Then tune the ADF to AU 205.0, and head towards the NDB.....				074deg	151.8NM	01+02
	To KL. Turn left to 063deg and tune the ADF to KL 352.0. Start your descent to 2,500ft and slow to 120kts 30mins after station passage AU.....				063deg	105.6NM	00+42
	Approach: To Fix 03. After station passage KL, turn right to runway reciprocal 106deg and fly heading for 2mins..... To runway. Commence a procedure turn. Make a right 45deg turn to 151deg and fly Hdg for one minute. Make a left 180deg turn to 331deg. When you can see the runway turn left to runway Hdg 286deg for a visual approach.....				106deg Final Hdg 286deg	4.0NM 9.1NM	00+02 00+05
	Land – Akola runway 28 Length – 3,974ft. Width – 151ft. Surface – Concrete						
Flight No. 813-02-20	Arrival Airport Elev. – 1,000ft.					273.4NM	01+51
	Estimated totals for this flight>>>						

Wednesday 23rd October

Today's flight takes us to Jabalpur, which means "the city of the rocks". The earthquake that struck Jabalpur and the surrounding areas, on the 22nd of May 1997, was the biggest earthquake in the 20th century to have been centred in or very close to a major city in India. The earthquake occurred at 04:22 am (local time) and caused significant damage to structures in the districts of Jabalpur, Mandla, Sivni and Chhindwada. About 8,500 houses collapsed and 53,000 houses were badly damaged. During the earthquake, 38 people died and about 350 were injured.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 28	Init. Hdg – 078deg.	Init. Alt – 3,500ft	Apt Elev. – 1,000ft.			
Akola (VAAK) India To Jabalpur (VAJB) India	Departure: To KL. Tune the ADF to KL 352.0. After take off make a standard rate left turn to 078deg, and head for KL.....				078deg	5.4NM	00+03
	Enroute: To NP. Continue on a heading of 078deg, and follow the OB (258deg) bearing from KL for 55 minutes. Then tune the ADF to NP 372.0, and head towards the NDB.....				078deg	114.3NM	00+47
	To JB. Turn left to 025deg and follow the OB (205deg) bearing from NP. When you lose the NP NDB tune the ADF to JB 301.0. You will pick up the NDB after a few minutes – head towards the NDB. When you can see Jabalpur aerodrome in front of you, maintain your altitude and slow to 120kts.....				025deg	136.2NM	00+55
	Approach: To Fix 04. After station passage JB, turn right to runway reciprocal 057deg and fly heading for 2mins.....				057deg	4.0NM	00+02
	To runway. Commence a procedure turn. Make a left 45deg turn to 012deg and fly Hdg for one minute. Make a right 180deg turn to 192deg. When you can see the runway turn right to runway Hdg 237deg for a visual approach..... Land – Jabalpur runway 24 Length – 4,508ft. Width – 150ft. Surface – Bituminus				Final Hdg 237deg	9.5NM	00+05
Flight No. 813-02-21	Arrival Airport Elev. – 1,624ft.				Estimated totals for this flight>>>		269.4NM 01+52

Thursday 24th October

Today's flight takes us over the holy city of Allahabad, which is situated at the junction of two rivers – the Ganges and the Jumna. This area is the true Prayag, the place of pilgrimage, to which hundreds of thousands of devout Hindus repair to wash away their sins in the sacred river. It is here that the great festival called the Magh Mela is held.

In the book, when Phileas Fogg was about 50 miles from Allahabad he discovered that the trans-India railway was incomplete. He was forced to seek another mode of transport at this point, and had to purchase an elephant for £2,000 to continue the journey. During the journey to Allahabad, they rescued a young woman called Aouda from involuntary suttee. They discovered that she had a relative in Hong Kong and Phileas Fogg agreed to take her there.

From - To	Flight Description. "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 24	Init. Hdg – 356deg.	Init. Alt – 3,500ft	Apt Elev. – 1,624ft.			
Jabalpur (VAJB) India To Varanasi (VIBN) India	Departure: To KL. Tune the ADF to JB 301.0. After take off make a standard rate left turn to 356deg, and head for JB.....				356deg	3.9NM	00+02
	Enroute: To KJ. Continue on a heading of 356deg, commence your climb to 3,500ft and follow the OB (176deg) bearing from JB. 15mins after station passage KL retune the ADF to KJ 403.0, and head towards the NDB. You will shortly cross, and then roughly follow the river Ken to KJ.....				356deg	98.2NM	00+40
	To FIL. Turn left to 129deg and follow the OB (309deg) bearing from FLO. 26mins after station passage Fix 03 retune the ADF to FIL 380.0 and head towards the NDB.....						
	To AP. Turn right to 068deg, and follow the OB (248deg) bearing from KJ. When you pass over the river Jumna retune the ADF to AP 328.0 and head towards the NDB.....				068deg	104.4NM	00+42
	To BN. Turn right to 091deg, tune the ADF to BN 222.0. Tune Nav1 to runway 27 ILS 109.90, and the OBS to 274deg. When Nav 1 DME reads 18.0NM commence you descent to 1,400ft and slow to 120kts....				091deg	62.4NM	00+25
	Approach: To Fix 04. After station passage BN, turn right to runway reciprocal 094deg and fly heading for 2mins..... To runway. Commence a procedure turn. Make a right 45deg turn to 139deg and fly Hdg for one minute. Make a left 180deg turn to 319deg. When you can see the runway turn left to runway Hdg 274deg for a visual or ILS approach..... Land – Varanasi runway 27 Length – 7,245ft. Width – 148ft. Surface – Tarmac				094deg Final Hdg 274deg	4.0NM 8.6NM	00+02 00+05
Flight No. 813-02-22	Arrival Airport Elev. – 262ft.					281.5NM	01+56

Friday 25th October

Today's flight takes us over the course of the Ganges, which is officially, as well as popularly, called the Ganga, both in Hindi and in other Indian languages, internationally it is known by its Anglicized name, the Ganges, and is the holy river of the Hindus. For most of its course, it is a wide and sluggish stream, flowing through one of the most fertile and densely populated tracts of territory in the world. Despite its importance, its length of 1,560 miles (2,510 kilometres) makes it relatively short by both world and Asian standards.

The Ganges rises in the southern Himalayas on the Indian side of the Tibet border. Its five headstreams--the Bhagirathi, Alaknanda, Mandakini, Dhauliganga, and Pindar--all rise in the Uttarakhand region, a division of the state of Uttar Pradesh. Of these, the two main headstreams are the Alaknanda (the longer of the two), which rises about 30 miles north of the Himalayan peak of Nanda Devi, and the Bhagirathi, which originates about 10,000 feet (3,050 metres) above sea level in an ice cave at the foot of the Himalayan glacier known as Gangotri. Gangotri itself is a sacred place for Hindu pilgrimage. The true source of the Ganges, however, is considered to be at Gaumukh, about 13 miles southeast of Gangotri.

Although there is a seasonal variation in the river's flow, its volume is relatively constant. From April to June the melting Himalayan snows feed the river, while in the rainy season from July to September the rain-bearing monsoon winds cause floods.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 24	Init. Hdg – 081deg.	Init. Alt – 3,500ft	Apt Elev. – 262ft.			
Varanasi (VIBN) India To Bhagalpur (Z12Q) India	Departure: To Fix 03. Tune Nav 1 to BBN VOR/DME 113.90 and set the OBS needle to 086deg. After take off make a standard rate left turn to 081deg. Waypoint reached when the OBS needle centres.....				081deg	14.3NM	00+07
	Enroute: To PPT. Turn right to 086deg, commence your climb to 3,500ft and follow the OB (266deg) bearing from BBN. Tune Nav 2 to PPT VOR/DME 112.10 and set the OBS to 086deg. When Nav 2 picks up PPT, head towards the VOR.....				086deg	111.5NM	++45
	To Fix 04. Turn right to 099deg, and follow the OB (279deg) bearing from PPT. Tune Nav 1 to RAJ VOR 114.60 and set the OBS needle to 119deg. Waypoint reached when the Nav 1 OBS needle centres.....				099deg	93.2NM	00+38
	Approach: To Bhagalpur. Turn right to 119deg, commence your descent to 1,600ft and slow to 120kts. Follow the Nav 1 OBS needle until the signal disappears shortly after commencing your descent. Continue on a heading of 119deg and look for the aerodrome, which is fairly close to the banks of the Ganges.....				119deg	13.5NM	00+06
	To Fix 05. After station passage Z12Q, turn left to runway reciprocal 096deg and fly heading for 2mins.....				096deg	4.0NM	00+02
	To runway. Commence a procedure turn. Make a right 45deg turn to 141deg and fly Hdg for one minute. Make a left 180deg turn to 321deg. When you can see the runway, turn left to runway Hdg 276deg for a visual approach.....				Final Hdg 276deg	9.2NM	00+04
	Land – Bhagalpur runway 28 Length – 3,538ft. Width – 95ft. Surface – Asphalt						
Flight No. 813-02-23	Arrival Airport Elev. – 150ft.				Estimated totals for this flight>>>		
						245.7NM	01+42

Saturday 26th October

Today's leg takes us to the city of Calcutta, which was first mentioned in 1495. However, its history as a British settlement dates from the establishment of a trading post there by Job Charnock, an agent of the English East India Company, in 1690. The city's name is an Anglicized version of Kalikata. According to some, Kalikata is derived from the Bengali word Kalikshetra, meaning "Ground of (the goddess) Kali". Calcutta is located on the east bank of the Hooghly River, once the main channel of the Ganges River, about 96 miles (154 kilometres) upstream from the head of the Bay of Bengal; there the port city developed as a point of transshipment from water to land and from river to sea. The maximum temperature reaches about 108° F (42° C) and the minimum temperature about 44° F (7° C). The average annual rainfall is about 64 inches (1,625 millimetres), of which most falls during the Monsoon from June to September.

When we arrive in Calcutta we are still one day behind Phileas Fogg.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 28	Init. Hdg – 120deg.	Init. Alt – 3,500ft	Apt Elev. – 150ft.			
Bhagalpur (Z12Q) India To Calcutta (VECC) India	Departure: To RJ. Tune the ADF to RJ 228.0. After take off make a standard rate right turn to 120deg, and commence your climb towards 3,500ft. You will pick up the NDB about 12mins after take off.....				120deg	103.3NM	00+43
	Enroute: To EA. Turn right to 187deg, and climb to 4,500ft and follow the OB (007deg) bearing from RJ. When the RJ signal disappears retune the ADF to EA 323.0 and head towards the NDB. Tune Nav1 to runway 1R ILS 109.90, and the OBS to 007deg. Commence your descent to 1,300ft and slow to 120kts when the Nav 1 DME reads 20NM.....				187deg	108.9NM	00+44
	Approach: To Fix 03. Continue on a heading of 187deg for 2mins.....				187deg	4.0NM	00+02
	To Fix 04. Turn left to 097deg until the runway is visible out of your left cockpit window.....				097deg	2.4NM	00+01
	To runway. Make a left turn to 007deg for either a visual or ILS approach..... Land – Calcutta runway 1R Length – 11,940ft. Width – 150ft. Surface – Concrete				007deg	4.6NM	00+02
Flight No. 813-02-24	Arrival Airport Elev. – 16ft.				Estimated totals for this flight>>>		223.2NM 01+32

Sunday 27th October

This leg takes us across the delta formed by the rivers Ganges (called the Padma in Bangladesh), Meghna and Brahmaputra. This vast area is subjected to constant erosion and deposition of silt because of the shifts and changes in these active river courses. Vast areas are subject to large-scale inundation during the monsoon months from June to September. The rivers are never in exactly the same place for two successive years, islands and sizable newly deposited lands (called chars) in the river appear and disappear seasonally. In addition, tidal surges accompanying tropical cyclones sweeping inland from the Bay of Bengal periodically bring great destruction to the delta region. Every year these floods make millions of people homeless, however the death toll is usually mercifully low and is mainly caused by hunger and disease rather than the direct effects of the flooding.

We land in Myanmar, which used to be known as Burma.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 1R	Init. Hdg – 097deg.	Init. Alt – 3,500ft	Apt Elev. – 16ft.			
Calcutta (VECC) India To Kyauktu (VYKU) Myanmar	Departure: To Fix 02. Tune the ADF to EA 323.0. After take off make a right turn to 097deg. Waypoint reached when the RMI reads 265deg.....				097deg	17.9NM	00+09
	Enroute: To BL. Turn left to 085deg, and follow the OB (265deg) bearing from EA. Start your climb towards 3,500ft and 15mins after station passage Fix 02 retune the ADF to BL 368.0 and head towards the NDB.....				085deg	87.5NM	00+36
	To EG. Turn right to 112deg, and follow the OB (292deg) bearing from BL. 10mins after station passage BL retune the ADF to EG 287.0 and head towards the NDB				112deg	90.4NM	00+37
	To HN. Turn left to 105deg, and start to climb towards 9,500ft. 25mins after station passage EG retune the ADF to HN 205.0. 36mins after station passage EG you should be over the last mountain ridge – start your descent to 3,000ft.....				105deg	131.2NM	00+52
	Approach: To Fix 03. Turn right to 161deg, continue your descent and follow the OB (341deg) bearing from HN. When established on track, retune the ADF to KU 235.0. Waypoint reached when the RMI reads 210deg... To runway. Turn right to 210deg and make a visual approach to the runway..... Land – Kyauktu runway 21 Length – 3,796ft. Width – 75ft. Surface – Gravel				161deg 210deg	13.7NM 5.6NM	00+06 00+02
Flight No. 813-02-25	Arrival Airport Elev. – 1,249ft.				Estimated totals for this flight>>>		346.3NM 02+22

Monday 28th October

This leg follows the river Irrawaddy for most of the time. The Irrawaddy is named after the Hindu eravati or 'Elephant River'. The river in Burmese consciousness, like the Ganges to the Indian, is a spiritual entity, and is a provider of the wherewithal for life and happiness, material and spiritual well being. Rising in the southern Himalayas, it dissects the land from north to south for 1,350 miles, emptying through a nine-armed delta into the Indian Ocean. In colonial times, before railways and car roads, the river was known as the 'Road to Mandalay'.

We land at Yangôn, which was called Rangoon until 1989, when the government of Myanmar requested that Yangôn, a transliteration reflecting the Burmese pronunciation of the city's name, be used by other countries. The most notable building in Yangôn is the Shwe Dagon Pagoda, a great Buddhist temple complex that crowns a hill about one mile north of the Cantonment. The pagoda itself is a solid brick stupa (Buddhist reliquary) that is completely covered with gold. It rises 326 feet (99 m) on a hill 168 feet (51 m) above the city.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 21	Init. Hdg – 210deg.	Init. Alt – 3,500ft	Apt Elev. – 1,249ft.			
Kyauktu (VYKU) Myanmar To Yangôn (VYYY) Myanmar	Departure: To Fix 01. Tune the ADF to BGN 335.0. After take off start your climb towards 3,500ft and continue on runway heading 210deg until the RMI reads 102deg.....				210deg	6.7NM	00+03
	Enroute: To Fix 02. Turn left to 101deg and head towards the NDB. Waypoint is over the river.....				101deg	43.0NM	00+18
	To Fix 03. Turn right to 181deg, descend to 2,500ft, and follow the river. Tune the ADF to MW 305.0.....				181deg	14.0NM	00+06
	To Fix 04. Turn right to 220deg and continue to follow the river.....				220deg	10.7NM	00+04
	To MW. Turn left to 163deg, climb to 5,500ft, follow the river and head towards the NDB.....				163deg	41.1NM	0017
	To Fix 11. Tune the ADF to YGN 265.0, and continue to follow the various twists and turns of the Irrawaddy. The waypoint is reached when you reach a point where you are unsure about the course of the river. At this point the ADF will pick up YGN.....				Av C'se 168deg	142.8NM	0058
	To YGN. Turn left to 143deg, and head towards the NDB. Tune Nav1 to runway 21 ILS 109.90, and the OBS to 213deg. Commence your descent to 3,000ft and slow to 120kts when the DME reads 21NM.....				143deg	74.2NM	00+30
	Approach: To runway. Turn right to 213deg and make a visual or ILS approach to the runway. The runway seems to blend into the surrounding countryside, so I suggest that you use the ILS to line yourself up for the runway.. Land – Yangôn Intl runway 21 Length – 8,128ft. Width – 200ft. Surface – Concrete				213deg	11.4NM	00+06
Flight No. 813-02-26	Arrival Airport Elev. – 108ft.				Estimated totals for this flight>>>		343.9NM 02+22

Tuesday 29th October

Today's leg takes us across the Bay of Bengal to Moulmein, and then down the coast of Myanmar, and over the town of Moulmein.

Moulmein was effectively the western end of the infamous "Death Railway" which was built for the Japanese by Allied POWs. Work started in June 1942 and was completed about 14 months later. It is estimated that 100,000 workers died during the construction of the railway, most of these were local labourers, however there were also 6,540 British, 2,830 Dutch, 2,710 Australian, 365 American and 100 Japanese and Korean deaths - mostly from a combination of sickness, malnutrition and exhaustion.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 21	Init. Hdg – 209deg.	Init. Alt – 3,500ft	Apt Elev. – 108ft.			
Yangôn (VYYY) Myanmar To Dawei (VYDW) Myanmar	Departure: To MDS. Tune the ADF to MDS 397.0. After take off turn slightly left and head towards the NDB.....				209deg	2.8NM	00+02
	Enroute: To MM. Turn left to 107deg, and follow the OB (287deg) bearing from MDS. 10mins after station passage MDS retune the ADF to MM 330.0, and head towards the NDB.....				107deg	92.1NM	00+38
	To Fix 01. Turn right to 173deg and follow the coastline. When you lose the MM NDB, retune the ADF to DWI 310.0. Waypoint reached when the RMI reads 150deg.....				173deg	113.6NM	00+46
	To DWI. Turn left to 150deg and head towards the NDB. Commence your descent to 1,500ft and slow to 120kts, after passing over a range of hills (6mins after station passage Fix 01).....				150deg	32.3NM	00+13
	Approach: To Fix 02. Continue on runway reciprocal 150deg and fly heading for 2mins..... To runway. Commence a procedure turn. Make a right 45deg turn to 195deg and fly Hdg for one minute. Make a left 180deg turn to 015deg. When you can see the runway turn left to runway Hdg 330deg for a visual approach..... Land – Dawei runway 33 Length – 5,100ft. Width – 50ft. Surface – Bituminus				150deg Final Hdg 330deg	4.0NM 9.1NM	00+02 00+05
Flight No. 813-02-27	Arrival Airport Elev. – 85ft.				Estimated totals for this flight>>>		253.9NM 01+46

Wednesday 30th October

Today's leg takes us to Ranong, which is just over the border in Thailand. Ranong is best known as fishing and trading port, and was settled by the Hokkien Chinese, whose strong influence is evident in the town.

Ranong province is known for having the highest rainfall in all Thailand, the rainy season lasting for about 8 months. This has led to the pun that the name Ranong is in fact taken from the English *rain on*.

From - To	Flight Description. "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM	
	Dep. Rwy – 33	Init. Hdg – 172deg.	Init. Alt – 3,500ft	Apt Elev. – 85ft.				
Dawei (VYDW) Myanmar To Ranong (VTSR) Thailand	Departure: To Fix 03. Tune the ADF to DWI 310.0. After take off make a standard rate right turn to 172deg. Waypoint reached when the RMI reads 347deg.....				172deg	10.8NM	00+06	
	Enroute: To ME. Turn left to 167deg, and follow the OB (347deg) bearing from DWI. When you lose the DWI signal, retune the ADF to ME 300.0, and head towards the NDB.....				167deg	94.6NM	00+39	
	To KT. Turn right to 182deg, follow the OB (002deg) bearing from ME and climb to 4,500ft. When you lose the ME signal, retune the ADF to KT 290.0, and head towards the NDB.....				182deg	143.9NM	00+58	
	To RN. Turn left to 172deg, retune the ADF to RN 375 and head towards the NDB. Commence your descent to 1,400ft and slow to 120kts.....				172deg	16.2NM	00+07	
	Approach: To Fix 04. Turn right to runway reciprocal 203deg and fly heading for 2mins.....				203deg	4.0NM	00+02	
	To runway. Commence a procedure turn. Make a right 45deg turn to 248deg and fly Hdg for one minute. Make a left 180deg turn to 068deg. When you can see the runway turn left to runway Hdg 023deg for a visual approach.....				Final Hdg 023deg	8.3NM	00+04	
Land – Ranong runway 2				Length – 6,592ft.	Width – 148ft.	Surface – Asphalt		
Flight No. 813-02-28	Arrival Airport Elev. – 55ft.				Estimated totals for this flight>>>		277.8NM	01+56

Thursday 31st October

After the waypoint at Phuket, we fly over Phang Nga Bay, which is dotted with fantastic limestone islands rising up from the sea. Some of the islands are 1,000 feet high and many contain caves hung with stalactites. One of the islands is Khao Phingkan, which was the location for scenes in the film "Man with the Golden Gun".

We then fly on over Penang, which was founded in 1786 having been ceded to the East India Company by the Sultan of Kedah in 1785 by an agreement with Captain Light. In 1796 it was made a penal settlement, when 700 convicts were transferred from the Andaman Islands. In 1826 Penang combined with Malacca and Singapore to form the Straits Settlements. Following World War II, the Straits Settlements were broken up, and Penang was included in the Malayan Union in 1946, the Federation of Malaya in 1948, and Malaysia in 1963.

From - To	Flight Description. "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 2	Init. Hdg – 178deg.	Init. Alt – 4,500ft	Apt Elev. – 55ft.			
Ranong (VTSR) Thailand To Butterworth (WMKB) Malaysia	Departure: To Fix 04. Tune the ADF to RN 375.0. After take off, make a standard rate right turn to 178deg. Waypoint reached when the RMI reads 010deg.....				178deg	8.4NM	00+05
	Enroute: To PU. Turn right to 190deg, follow the OB (010deg) bearing from RN and start to climb towards 4,500ft. When you can see the sea ahead of you, retune the ADF to PU 360.0, and head towards the NDB.....				190deg	98.2NM	00+40
	To TR. Turn left to 115deg, follow the OB (295deg) bearing from PU and descend to 3,500ft. 2-3mins after you cross the coast retune the ADF to TR 248.0 and head towards the NDB.....				115deg	85.9NM	00+35
	To LK. Turn right to 176deg. Retune the ADF to LK 344.0, and head towards the NDB.....				176deg	71.7NM	00+29
	To PNG. Turn left to 151deg and follow the OB (331deg) bearing from LK. Just before you cross the coast retune the ADF to PNG 406.0, and head towards the NDB. When you are over the centre of Penang Island descend to 2,500ft and slow to 120kts.....				151deg	68.8NM	00+28
	Approach: To Fix 04. Turn left to 095deg and fly heading for 2¼ mins..... To runway. Turn left to runway Hdg 005deg for a visual approach..... Land – Butterworth runway 36 Length – 8,000ft. Width – 150ft. Surface – Asphalt				095deg 005deg	4.8NM 8.8NM	00+02 00+04
Flight No. 813-02-29	Arrival Airport Elev. – 6ft.					347.0NM	02+23

Friday 1st November

Today's leg takes us to Singapore, which was the location for Lt General Percival's surrender to Japanese General Tomoyuki Yamashita on the 15th of February 1942. Following the Allied re-occupation of Singapore on the 12th of September 1945, it became a Crown Colony and just over a decade later, it was agreed that it would become a self-governing state. No sooner was this achieved than the Malayan Prime Minister, Tunku Abdul Rahman, proposed the formation of Malaysia comprising Malaya, Sarawak (Brunei), British North Borneo and Singapore. In excess of 70% of Singaporeans voted in favour in 1962 and Singapore became an independent member of Malaysia, which came formally into being in 1963. Singapore's presence within Malaysia was, however, a short and unhappy one and after some internal disturbances throughout 1964 and 65 it left the group. By the end of 1965 it became, and remains, the Republic of Singapore.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 2	Init. Hdg – 160deg.	Init. Alt – 7,500ft	Apt Elev. – 6ft.			
Butterworth (WMKB) Malaysia To Changi (WSSS) Singapore	Departure: To PR. Tune the ADF to PR 270.0. After take off turn right to 160deg, head towards the NDB and start your climb to 7,500ft.....				160deg	36.6NM	00+16
	Enroute: To TA. Turn left to 158deg, retune the ADF to TA 315.0, and head towards the NDB.....				158deg	62.8NM	00+25
	To KL. Turn left to 149deg, retune the ADF to KL 255.0, and head towards the NDB.....				149deg	69.2NM	00+28
	To MC. Turn left to 144deg, retune the ADF to MC 362.0, and head towards the NDB.....				144deg	60.2NM	00+24
	To BP. Turn left to 117deg, retune the ADF to BP 276.0, and head towards the NDB.....				117deg	47.8NM	00+19
	To Fix 03. Turn right to 122deg and follow the OB (302deg) bearing from BP for 4mins. Retune the ADF to BM 370.0, and head towards the NDB. Commence your descent to 2,100ft and slow to 120kts. Tune Nav1 to runway 2L ILS 110.90, and the OBS to 023deg. Look out of the left cockpit window to see the runway coming up. Be careful not to land at Paya Lebar aerodrome which you will see just before Changi.....				122deg	70.1NM	00+29
	Approach: To runway. Turn left to 023deg and make a visual or ILS approach to the runway..... Land – Changi runway 2L Length – 13,152ft. Width – 197ft. Surface – Bituminus				023deg	7.4NM	00+04
Flight No. 813-02-30	Arrival Airport Elev. – 22ft.				Estimated totals for this flight>>>		354.1NM 02+25

Saturday 2nd November

Phileas Fogg's ship the "Rangoon" puts into Singapore on 31st October for coaling. Thus we are still only one day behind him.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 2L	Init. Hdg – 359deg.	Init. Alt – 4,500ft	Apt Elev. – 22ft.			
Changi (WSSS) Singapore To Kuala Terengganu (WMKN) Malaysia	Departure: To KK. Tune the ADF to KK 286.0. After take off turn left to 359deg, head towards the NDB and start your climb to 4,500ft.....				359deg	10.5NM	00+05
	Enroute: To PK. Turn left to 343deg and follow the OB (163deg) bearing from KK. When you cross the coast, retune the ADF to PK 282.0, and head towards the NDB.....				343deg	116.7NM	00+47
	To Fix 02. Turn left to 339deg, follow the OB (159deg) bearing from PK and climb to 6,500ft. When you lose the NDB, retune the ADF to GK 520.0, and head towards the NDB. Tune Nav 1 to VKT VOR/DME 115.40 and set the OBS needle to 047deg. Waypoint reached when the OBS needle centres.....				339deg	108.1NM	00+43
	Approach: To runway. Turn right to 047deg and commence a 500FPM descent. Make a visual approach to the runway..... Land – Sultan Mahmud runway 4 Length – 6,615ft. Width – 150ft. Surface – Asphalt				047deg	26.7NM	00+11
Flight No. 813-02-31	Arrival Airport Elev. – 19ft.					262.0NM	01+46

Sunday 3rd November

Today's flight takes us across the South China Sea to the island of Con Son, which the French turned into a penal camp for Vietnamese nationalists. During the Vietnam war the Americans used the island to hold prisoners of war.

Nowadays it is the centre of the development of two offshore gas fields. The US\$1.3 billion project, by the Vietnam Oil and Gas Corporation and its foreign partners BP (UK), ONGC Videsh (India) and ConocoPhillips (the US), is expected to provide a reliable source of energy for Vietnam's rapidly growing economy.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 4	Init. Hdg – 052deg.	Init. Alt – 3,500ft	Apt Elev. – 19ft.			
Kuala Terengganu (WMKN) Malaysia To Con Son (VVCS) Vietnam	Departure: To Fix 02. Tune the ADF to TU 312.0. After take off turn right to 052deg. Waypoint reached when the RMI reads 226deg.....				052deg	3.2NM	00+02
	Enroute: To CS. Turn left to 046deg, follow the OB (226deg) bearing from TU and climb to 3,500ft. When you lose the NDB, retune the ADF to CS 333.0. There will be a period of about 1 hour before you pick up CS. When you can see the island, descend to 2,500ft, and when you are safely past the hills, descend to 1,500ft and slow to 120kts.....				046deg	288.1NM	01+58
	Approach: To Fix 03. Turn right to runway reciprocal 109deg and fly heading for 2mins..... To runway. Commence a procedure turn. Make a right 45deg turn to 154deg and fly Hdg for one minute. Make a left 180deg turn to 334deg. When you can see the runway turn left to runway Hdg 289deg for a visual approach..... Land – Con Son runway 29 Length – 3,609ft. Width – 98ft. Surface – Asphalt				109deg Final Hdg 289deg	4.0NM 9.2NM	00+02 00+05
	Flight No. 813-02-32				Arrival Airport Elev. – 19ft.		Estimated totals for this flight>>>
						304.5NM	02+07

Monday 4th November

Today's leg takes us over the delta of the river Mekong, and on to Phnom Penh.

Just above Phnom Penh is the Tônlé Sap, which is the largest lake of Southeast Asia and is fed by numerous streams. During the dry season, it is drained by the Tônlé Sap River southeast to the Mekong River. During the wet monsoon season of June to November, the high waters of the Mekong River reverse the flow of the Tônlé Sap River and increase the size of the lake from 2,600 to 10,400 sq km (about 1,000 to 4,020 sq mi). When the high waters of the Mekong River recede, the flow reverses. This natural mechanism provides a unique and important balance to the Mekong River down stream of the lake and ensures a flow of fresh water during the dry season into the Mekong delta in Vietnam which buffers the intrusion of salt water from the South China Sea into the rich agricultural lands of the delta.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 29	Init. Hdg – 344deg.	Init. Alt – 4,500ft	Apt Elev. – 19ft.			
Con Son (VVCS) Vietnam To Phnom Penh (VDPP) Cambodia	Departure:						
	To Fix 02. Tune the ADF to CS 333.0. After take off turn right to 344deg. Waypoint reached when the RMI reads 156deg.....				344deg	4.5NM	00+02
	Enroute:						
	To Fix 03. Turn left to 336deg, follow the OB (156deg) bearing from CS and climb to 4,500ft. When you can see the Mekong river, retune the ADF to CT 420.0. Waypoint reached when the RMI reads 316deg.....				336deg	51.4NM	00+22
	To CT. Turn left to 316deg and follow the river towards the NDB.....				316deg	43.8NM	00+18
	To Fix 04. Continue to follow the river. Tune Nav 2 to PNH 114.30. Waypoint reached when Nav 2 DME reads 68.8NM.....				317deg	34.0NM	00+14
	To Fix 05. Turn right to 006deg and follow the wider river. Commence your descent to 3,500ft.....				006deg	13.7NM	00+05
	To Fix 07. Continue to follow the river. Tune Nav1 to runway 23 ILS 109.70, and set the OBS to 226deg, tune the ADF to PNP 376.0.....				Av C'se 352deg	43.7NM	00+18
	To Fix 08. Turn left to 308deg, and continue to follow the river. Waypoint reached when the RMI reads 288deg.....				308deg	15.2NM	00+06
	Approach:						
	To PNP. Turn left to 288deg, commence your descent to 900ft and head towards the NDB. You will be able to see the runway coming up out of your left hand front window. Get the aeroplane into landing configuration during this leg.....				288deg	10.2NM	00+04
	To runway. Turn left to 226deg and make a visual or ILS approach to the runway. Note the very short finals here.....				226deg	2.6NM	00+01
	Land – Pochentong Intl runway 23 Length – 9,859ft. Width – 131ft. Surface – Asphalt						
Flight No. 813-02-33	Arrival Airport Elev. – 39ft.					219.1NM	01+30
	Estimated totals for this flight>>>						

Tuesday 5th November

Today's flight takes us up the Mekong River. The river is known by many names along its 2,600m (4,200km) length - the Dza-Chu in Tibet, the Lancang Jiang in China and the Mae Nam Khong in Thailand. The Mekong makes a dramatic change at the border with Vietnam, where it divides into dozens of tributaries and becomes the Cuu Long or Nine Dragons as it enters the Mekong Delta and empties into the South China Sea.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 23	Init. Hdg – 042deg.	Init. Alt – 3,500ft	Apt Elev. – 39ft.			
Phnom Penh (VDPP) Cambodia To Saravane (VLSV) Laos	Departure: To Fix 02. Tune the ADF to ST 444.0. After take off make a standard rate right turn to 042deg. You will shortly see the river in front of you, which you should follow. Start your climb towards 3,500ft.....				042deg	3.6NM	00+02
	Enroute: To ST. Follow the many twists and turns of the river. The river divides as it flows around the numerous islands – it doesn't matter which stream you elect to follow, as the streams rejoin each other after the island. You will pass close to the ST NDB, and the waypoint is when the needle quickly swings round.....				Av C'se 031deg	170.5NM	01+10
	To PS. Climb to 4,500ft and continue to follow the river. Retune the ADF to PS 220.0.....				Av C'se 352deg	101.0NM	00+41
	To Fix 10. Turn right to 045deg, descend to 3,500ft and establish your course on the OB (225deg) bearing from PS. Retune the ADF to SAR 200.0. Waypoint reached when the RMI reads 061deg.....				045deg	39.5NM	00+16
	Approach: To Runway. Turn right to 061deg, commence your descent and make a visual approach to the runway..... Land – Saravane runway 6 Length – 4,921ft. Width – 138ft. Surface – Grass				061deg	10.5NM	00+05
Flight No. 813-02-34	Arrival Airport Elev. – 574ft.				Estimated totals for this flight>>>		325.1NM 02+14

Wednesday 6th November

Today we fly over the Gulf of Tonkin, which in August 1964 was the location for attacks by North Vietnamese torpedo boats on the destroyers Maddox and C. Turner Joy of the U.S. Seventh Fleet. This led to a resolution put before the U.S. Congress by President Lyndon Johnson on Aug. 5, 1964 *"to approve and support the determination of the president, as commander in chief, in taking all necessary measures to repel any armed attack against the forces of the United States and to prevent further aggression"*. It also declared that the maintenance of international peace and security in Southeast Asia was vital to American interests and to world peace. Both houses of Congress passed the resolution on August 7, the House of Representatives by 414 votes to nil, and the Senate by a vote of 88 to 2. The resolution served as the principal constitutional authorization for the subsequent escalation of the United States' military involvement in the Vietnam War. Several years later, many congressmen came to see the resolution as giving the president a blanket power to wage war, and the resolution was repealed in 1970.

Having crossed the Gulf we land on Hainan Island, which is the location of a Pirelli 800,000-a-year radial tyre plant.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 6	Init. Hdg – 061deg.	Init. Alt – 7,500ft	Apt Elev. – 574ft.			
Saravane (VLSV) Laos To Meilan (ZJHK) China	Departure: To get sufficient altitude to clear the Central Highlands, you will need to make a climbing circuit of the aerodrome. To Fix 01. Tune the ADF to SAR 200.0. Start your stopwatch as soon as you commence the take off roll. Continue on runway heading 061deg for 2mins and start your climb towards 7,500ft.....				061deg	2.2NM	00+02
	To Fix 03. Make a standard rate right turn to 241deg. Waypoint reached when the RMI reads 331deg.....				241deg	3.7NM	00+02
	To P (Hue). Make a standard rate right turn to 062deg, and follow the OB (242deg) bearing from SAR. When you are past the mountains retune the ADF to P (Hue) 348.0 and head towards the NDB.....				062deg	87.6NM	00+36
	Enroute: To WL. Turn left to 038deg and follow the OB (218deg) bearing from P (Hue). When you lose the NDB, retune the ADF to WL 426.0 and head towards the NDB.....				038deg	157.9NM	01+00
	To Fix 04. Turn left to 029deg, follow the OB (209deg) course from WL and start your descent to 5,500ft. Tune Nav1 to runway 9 ILS 111.50, and set the OBS to 091deg. Start your descent to 3,500ft when you start to pick up the ILS.....				029deg	98.1NM	00+38
Flight No. 813-02-35	Approach: To Runway. Turn right to 091deg and make a visual or ILS approach to the runway.....				091deg	12.6NM	00+06
	Land – Meilan runway 9 Length – 11,801ft. Width – 148ft. Surface – Concrete						
	Arrival Airport Elev. – 75ft.					362.1NM	02+24

Thursday 7th November

Don't forget to install the Kai Tak scenery before flying this leg.

Kai Tak is named after two businessmen, Sir Ho Kai and Mr. Au Tak, who were involved in a company formed to reclaim land in Kowloon Bay for a residential housing scheme. The Company failed and the reclaimed land was left vacant. The first recorded flight from Kai Tak took place on Lunar New Year's Day in 1925, and the first commercial passengers flight, operated by Imperial Airways, landed on 24 March 1936 from Penang.

In 1974, the visual approach to runway 13 was replaced by the Instrument Guidance System (IGS). This significantly increased the utilization of the runway under adverse weather conditions particularly during long periods of the prevailing easterly winds.

On July 6, 1998, Kai Tak was replaced with Chek Lap Kok Airport, which was named after one of the islands that make up the airport's 1,248-hectare platform that was reclaimed from the sea.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 9	Init. Hdg – 355deg.	Init. Alt – 4,500ft	Apt Elev. – 75ft.			
Meilan (ZJHK) China To Hong Kong (HKG) Hong Kong SAR	Departure: To LH. Tune the ADF to LH 356.0. After take off turn left heading 355deg, you will pick up the NDB after a few minutes. Start to climb towards 4,500ft.....				355deg	74.9NM	00+32
	Enroute: To MA. Turn right to 071deg, follow the OB (251deg) bearing from LH and descend to 3,500ft. When you lose the NDB, retune the ADF to MA 322.0, which you should pick up after about 15 min. Head towards the NDB.....				071deg	186.4NM	01+16
	To LC. Turn right to 081deg, retune the ADF to LC 390.0, and head towards the NDB.....				081deg	24.2NM	00+10
	To Fix 02. Turn left to 070deg and head up the estuary, and start your descent to 1,500ft. Tune Nav1 to runway 13 IGS 111.90, and set the OBS to 088deg. Watch for the bridge on the right hand side.....				070deg	9.3NM	00+04
	To Fix 03. Turn right to 125deg and head over the bridge. Watch the IGS – the waypoint is reached when the localiser needle starts to centre.....				125deg	2.9NM	00+01
	Approach: To Fix 04. Turn left to 088deg, and you should see the famous checkerboard about 5 miles in front of you. Follow the IGS like an ILS – you will be heading just to the right of the checkerboard. I suggest that you change the cockpit zoom to 0.5, as it will make it easier to see the runway coming up on your right..... To Runway. Just before you get to the checkerboard (it's a fine judgement as to when!), turn right to 136deg and make a visual approach to the runway..... Land – Kai Tak runway 13 Length – 11,105ft. Width – 200ft. Surface – Concrete				088deg 136deg	5.0NM 0.7NM	00+02 00+01
Flight No. 813-02-36	Arrival Airport Elev. – 0ft.					303.4NM	02+06

Friday 8th November

In the book, Phileas Fogg and his companions encountered a storm between Singapore and Hong Kong which delayed the ship, and put them 24 hours behind their schedule. However, luck was on their side as the ship that was due to take them to Yokohama was delayed for 24 hours due to a problem with her boilers, and consequently they were still able to make their connection. We, however, have not made up any time and are still 1 day behind Phileas Fogg at Hong Kong.

Phileas Fogg looked for Aouda's relatives in Hong Kong, but found that they moved to Holland 2 years earlier. Thus, she continued to accompany them on the rest of their journey. Fix told Passepartout that he is a detective, however Passepartout did not believe him, and was tricked into an Opium den where he succumbed to the narcotic.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 13	Init. Hdg – 136deg.	Init. Alt – 3,500ft	Apt Elev. – 0ft.			
Hong Kong (HKG) Hong Kong SAR To Chin Men (RCBS) Taiwan	Departure: To TP. Tune the ADF to TP 280.0, and Nav1 to Shang Yi runway 6 ILS 108.50, set the OBS to 041deg. Tune Nav2 to SWA VOR/DME 112.60 and set the OBS to 064deg. After take off maintain runway heading 136deg, start to climb towards 3,500ft and head towards the NDB.....				136deg	7.4NM	00+04
	Enroute: To SWA. Turn left to 064deg, you will pick up the VOR signal after a few minutes. Follow the Nav2 OBS needle.....				064deg	155.0NM	01+03
	To Fix 01. Turn left to 060deg, and follow the OB (240deg) bearing from SWA. Waypoint reached when the ILS localiser needle centres.....				060deg	92.5NM	00+38
	Approach: To Fix 02. This is an offset approach, with a localiser needle only (I didn't want to make things too easy!). Turn left to 041deg, and follow the ILS. Maintain a height of 3,500ft until the Nav 1 DME reads 11.0NM, at which point you should commence a normal approach to arrive at Fix 02 at a height of 400 ft. Watch for the runway coming up on your right.....				041deg	12.2NM	00+05
	To Runway. Turn right to 066deg and make a visual approach to the runway..... Land – Shang Yi runway 6 Length – 8,243ft. Width – 148ft. Surface – Concrete				066deg	0.5NM	00+01
Flight No. 813-02-37	Arrival Airport Elev. – 91ft.					267.6NM	01+51

Saturday 9th November

Today's flight takes us over the island of Taiwan, or Formosa. From the mid-1660s to 1895, Taiwan was administered by the Imperial Chinese government, after which (until 1945) the island was ruled by the Japanese as a colony. In 1945, Taiwan reverted to China, and in 1949 it became the last territory controlled by the Nationalist government. The Nationalists have continued to claim jurisdiction over the Chinese mainland, whereas the government of the People's Republic of China on the mainland claims jurisdiction over Taiwan; both governments agree that the island is a sheng (province) of China. Taipei, designated by the Nationalists as the provisional capital of the Republic of China, was the provincial capital until 1967, when the capital was moved to Chung-hsing Hsin-ts'un.

The crest of the Chung-yang Shan-mo (Central Range) lies east of and parallels the island's axis. Scores of peaks rise to about 10,000 feet, the highest being Yü Shan 13,113 feet (3,997 metres) in the south central part of the island. Around the mountainous area are numerous independent hills, with an average height of 5,000 feet.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 6	Init. Hdg – 115deg.	Init. Alt – 3,500ft	Apt Elev. – 91ft.			
Chin Men (RCBS) Taiwan To Hateruma (RORH) Japan	Departure: To Fix 02. Tune the ADF to BS 345.0 and after take off turn right to 115deg. Waypoint reached when the RMI reads 277deg.....				115deg	4.6NM	00+02
	Enroute: To WK. Turn left to 097deg, follow the OB (277deg) bearing from BS and climb to 3,500ft. When you lose the signal from BS, start to climb towards 13,500ft and retune the ADF to WK 340.0.....				097deg	131.7NM	00+54
	To YU. Turn right to 109deg, retune the ADF to YU 380.0 and head for the NDB.....				109deg	45.9NM	00+16
	To Fix 03. Turn left to 084deg, follow the OB (264deg) bearing from YU and Start your decent to 3,500ft. Waypoint reached when you lose the YU signal.....				084deg	113.5NM	00+44
	To HR. Turn right to 157deg, retune the ADF to HR 332.0 and head for the NDB. Start your descent to 1,500ft and slow to 120kts.....				157deg	15.9NM	00+07
	Approach: To Fix 04. Turn right to runway reciprocal 205deg and fly heading for 2mins..... To runway. Commence a procedure turn. Make a right 45deg turn to 250deg and fly Hdg for one minute. Make a left 180deg turn to 070deg. When you can see the runway turn left to runway Hdg 025deg for a visual approach..... Land – Hateruma runway 2 Length – 2,630ft. Width – 82ft. Surface – Asphalt				205deg Final Hdg 025deg	4.0NM 9.2NM	00+02 00+05
Flight No. 813-02-38	Arrival Airport Elev. – 42ft.					324.8NM	02+10

Sunday 10th November

Today's leg takes us to Okinawa, which was the setting for the largest amphibious invasion of the Pacific campaign and the last major campaign of the Pacific War. More ships were used, more troops put ashore, more supplies transported, more bombs dropped and more naval guns fired against shore targets than any other operation in the Pacific. More people died during the Battle of Okinawa than all those killed during the atomic bombings of Hiroshima and Nagasaki. Casualties totalled more than 38,000 Americans wounded and 12,000 killed or missing, more than 107,000 Japanese and Okinawan conscripts killed, and perhaps 100,000 Okinawan civilians perished in the battle. Thirty-four allied ships and craft of all types were sunk, mostly by kamikazes, and 368 ships and craft damaged. The fleet also lost 763 aircraft. American losses at Okinawa were so heavy as to illicit Congressional calls for an investigation into the conduct of the military commanders. Not surprisingly, the cost of this battle in terms of lives, time and material, weighed heavily in the decision to use the atomic bomb against Japan just six weeks later.

American troops landed on the island on 1st April 1945 and the document ending the Battle of Okinawa was signed on what is now Kadena Air Base on 7th September 1945.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 2	Init. Hdg – 054deg.	Init. Alt – 3,500ft	Apt Elev. – 42ft.			
Hateruma (RORH) Japan To Okinawa Island (RODN) Japan	Departure: To IG. Tune the ADF to IG 349.0 and after take off turn right to 054deg and head towards the NDB.....				054deg	27.1NM	00+12
	Enroute: To SJ. Turn right to 065deg, tune the ADF to SJ 250.0 and head towards the NDB.....				065deg	59.8NM	00+24
	To Fix 02. Turn left to 060deg and follow the OB (240deg) bearing from SJ. Tune Nav1 to KAD VORTAC 112.00 and set the OBS to 060deg. Tune Nav2 to NHC VORTAC 116.50 and set the OBS to 078deg. About 10mins after station passage SJ, Nav1 will pick up KAD, follow the OBS needle. Waypoint reached when the Nav2 OBS needle centres.....				060deg	145.3NM	00+59
	To Fix 03. Turn right to 078deg and follow the Nav2 OBS needle. Tune Nav1 to runway 5L ILS 109.70, and set the OBS to 055deg. Waypoint reached when the ILS needle centres.....				078deg	7.1NM	00+03
	Approach: To Runway. Turn left to 055deg and make a visual or ILS approach to the runway Land – Kadena AB runway 5L Length – 12,108ft. Width – 300ft. Surface – Asphalt				055deg	16.2NM	00+07
Flight No. 813-02-39	Arrival Airport Elev. – 144ft.					255.5NM	01+45

Monday 11th November

Today's leg takes us up the eastern edge of the Ryukyu Islands and over the Ryukyu Trench. This is a deep ocean trench, which reaches a maximum depth of 24,629 feet (7,507 m). It is 1,398 miles (2,250 km) long, and its mean width is 37 miles (60 km). However, the deepest trench in the world is the Mariana Trench, situated east of the Mariana Islands. In 1957, during the International Geophysical Year, the Soviet research ship *Vityaz* sounded a new world record depth of 36,056 feet (10,990 m), which was later increased to 36,201 feet (11,034 m).

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 5L	Init. Hdg – 042deg.	Init. Alt – 3,500ft	Apt Elev. – 144ft.			
Okinawa Island (RODN) Japan To Kikai (RJKI) Japan	Departure: To ON. Tune the ADF to ON 398.0. After take off turn left to 042deg and start your climb towards 3,500ft. You will pick up the NDB in a few minutes				042deg	82.8NM	00+35
	Enroute: To Fix 02. Turn right to 055deg, and follow the OB (235deg) bearing from ON. About 5 mins after station passage ON retune the ADF to KI 382.0 and head towards the NDB. Start your descent to 1,000ft when you can see the island in front of you. Waypoint reached when you can start to see the aerodrome at the left hand end of the island.....				055deg	76.5NM	00+31
	Approach: To Runway. Turn left to 042deg, and then turn right to 070deg to make a visual approach to the runway..... Land – Kikai Aero runway 7 Length – 3,935ft. Width – 98ft. Surface – Asphalt				Final Hdg 070deg	7.4NM	00+03
Flight No. 813-02-40	Arrival Airport Elev. – 16ft.					166.7NM	01+09

Tuesday 12th November

Today's leg takes us to Nagasaki, which was the only Japanese port permitted by the Tokugawa shogunate (military government) to be used by foreigners between 1639 and 1859 when all other ports were closed. In the 19th century, Nagasaki became a leading East Asian coaling station and served as the winter port of the Russian Asiatic fleet until 1903.

The second atomic bomb dropped on Japan by the United States in World War II destroyed the innermost portion of Nagasaki on Aug. 9, 1945. The terrain and smaller size of Nagasaki reduced the destruction of life and property as compared to that of the atomic bomb explosion over Hiroshima, but nevertheless, 39,000 persons were killed outright and about 25,000 were injured. About 40 percent of the city's buildings were completely destroyed or severely damaged. The Japanese government commenced surrender negotiations the next day.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 7	Init. Hdg – 008deg.	Init. Alt – 3,500ft	Apt Elev. – 16ft.			
Kikai (RJKI) Japan To Nagasaki (RJFU) Japan	Departure: To Fix 02. Tune the ADF to KI 382.0 and after take off turn left to 008deg. Waypoint reached when the RMI reads 207deg.....				008deg	3.2NM	00+02
	Enroute: To TJ. Turn right to 027deg, and follow the OB (207deg) bearing from KI. When you lose the KI NDB, retune the ADF to TJ 333.0 and head towards the NDB.....				027deg	140.9NM	00+58
	To HK. Turn left to 349deg and follow the OB (169deg) bearing from TJ. 15mins after station passage TJ retune the ADF to HK 390.0 and head towards the NDB.....				349deg	69.1NM	00+28
	To OL. Turn left to 345deg and follow the OB (165deg) bearing from HK. 15mins after station passage HK retune the ADF to OL 195.0 and head towards the NDB. Tune Nav1 to runway 32 ILS 110.90, set the OBS to 324deg, and tune Nav2 to JBT DME 114.05. Start your descent to 2,400ft when the Nav2 DME reads 16NM. Waypoint reached when the ILS needles centre.....				345deg	74.6NM	00+30
	Approach: To Runway. Turn left to 324deg and make a visual or ILS approach to the runway Land – Nagasaki runway 32 Length – 9,849ft. Width – 197ft. Surface – Asphalt				324deg	8.3NM	00+04
Flight No. 813-02-41	Arrival Airport Elev. – 6ft.					296.1NM	02+02

Wednesday 13th November

In the book, the steamer at Hong Kong completed its repairs 12 hours early and consequently Phileas Fogg missed it and was forced to hire a small schooner to take him to Shanghai. There he managed to stop a boat to take him on to Nagasaki and Yokohama. Meanwhile Passepartout, having managed to awake from the opium sufficiently, was able to catch the steamer directly to Yokohama.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 32	Init. Hdg – 144deg.	Init. Alt – 7,500ft	Apt Elev. – 6ft.			
Nagasaki (RJFU) Japan To Tokushima (RJOS) Japan	Departure: To Fix 03. Tune the ADF to JB 342.5 and after take off make a left standard rate turn to 144deg. Waypoint reached when the RMI reads 343deg.....				144deg	13.8NM	00+07
	Enroute: To Fix 04. Turn left to 054deg. Waypoint reached when the RMI reads 272deg.....				054deg	31.8NM	00+14
	To MF. Turn right to 072deg and follow the OB (252deg) bearing from JB. When lose the NDB signal retune the ADF to MF 382.0, which you will pick up after about 10 minutes. Head towards the NDB.....				072deg	113.9NM	00+44
	To KJ. Turn right to 091deg and follow the OB (271deg) bearing from MP. 12mins after station passage MP retune the ADF to KJ 352.0 and head towards the NDB. When you can see the sea start your descent to 4,500ft, and when you have crossed the last of the mountains start your descent to 1,300ft. Tune Nav1 to runway 29 ILS 108.90, set the OBS to 291deg.....				091deg	104.6NM	00+41
	Approach: To Fix 05. Turn left to 021deg and follow the OB (201deg) bearing from KJ. Waypoint reached when the ILS needle centres.....				021deg	8.5NM	00+04
	To Runway. Turn left to 291deg and make a visual or ILS approach to the runway Land – Tokushima runway 29 Length – 6,560ft. Width – 148ft. Surface – Asphalt				291deg	3.8NM	00+02
Flight No. 813-02-42	Arrival Airport Elev. – 26ft.				Estimated totals for this flight>>>		276.4NM 01+52

Thursday 14th November

Today's leg takes us past Mount Fuji (Japanese Fuji-San, also Fujiyama, or Fuji No Yama), which is the highest mountain in Japan, rising to a height of 12,388 feet (3,776 m). The base of the volcano is about 78 miles (125 km) in circumference and has a diameter of about 25 to 30 miles (40 to 50 km). At the summit, the crater spans about 1,600 feet (500 m) in surface diameter and is about 820 feet (250 m) deep.

The mountain's name, of Ainu origin, means "everlasting life." Mount Fuji, with its graceful conical form, has become famous throughout the world and is considered the sacred symbol of Japan. The sacred mountain (one sect, the Fujiko, accords it virtually a soul) is surrounded by temples and shrines, there even being shrines at the edge and the bottom of the crater. Climbing the mountain has long been a religious practice (though until the Meiji Restoration women were not allowed to climb it). The ascent in early times was usually made in the white robes of a pilgrim. Today great crowds, numbering more than 100,000 a year, flock there, mostly during the climbing season from July 1 to August 26.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 29	Init. Hdg – 052deg.	Init. Alt – 5,500ft	Apt Elev. – 26ft.			
Tokushima (RJOS) Japan To Tokyo (Haneda) (RJTT) Japan	Departure: To OW. Tune the ADF to OW 211.0 and after take off make a right turn to 052deg, and start your climb towards 5,500ft.....				052deg	59.2NM	00+24
	Enroute: To CU. Turn right to 064deg, retune the ADF to CU 368.0 and head towards the NDB.....				064deg	27.3NM	00+11
	To KC. Turn right to 083deg, retune the ADF to KC 360.0 and head towards the NDB.....				083deg	52.8NM	00+21
	To YU. Turn right to 097deg, follow the OB (277deg) bearing from KC and start your climb towards 9,500ft. When you can clearly see Mount Fuji in front of you retune the ADF to YU 249.0. When you are over the coastline slow to 120kts and start your descent to 6,500ft. Tune Nav1 to runway 34R ILS 108.90, set the OBS to 337deg.....				097deg	132.3NM	00+58
	Approach: To Fix 02. Turn left to 061deg, follow the OB (241deg) bearing from YU and start your descent to 3,300ft. Waypoint reached when the ILS needle centres..... To Runway. Turn left to 337deg and make a visual or ILS approach to the runway Land – Haneda runway 34R Length – 9,851ft. Width – 197ft. Surface – Asphalt				061deg 337deg	18.2NM 11.4NM	00+08 00+05
Flight No. 813-02-43	Arrival Airport Elev. – 19ft.					301.2NM	02+07

Friday 15th November

After some adventures, Phileas Fogg and Passepartout were reunited at Yokohama (Tokyo harbour) and together with Mr Fix, they set out across the Pacific on the paddle steamer the "*General Grant*". We won't be able to follow them directly across the ocean and must go round via the Aleutian Islands.

Phileas Fogg arrived in Yokohama on 14th November, so we are running neck and neck again.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 34R	Init. Hdg – 346deg.	Init. Alt – 3,500ft	Apt Elev. – 19ft.			
Tokyo (Haneda) (RJTT) Japan To Hanamaki (RJSI) Japan	Departure: To MI. Tune the ADF to MI 228.0 and after take off make a right turn to 346deg, cross over the docks at Yokohama and also central Tokyo, where you will see the Emperor's Palace. Start your climb towards 3,500ft.....				346deg	24.3NM	00+11
	Enroute: To GO. Turn right to 042deg, follow the OB (222deg) bearing from MI and start to climb towards 7,500ft. 15mins after MI retune the ADF to GO 221.0 and head towards the NDB.....				042deg	62.2NM	00+25
	To ZM. Turn left to 008deg and follow the OB (188deg) bearing from GO. 10mins after station passage GO retune the ADF to ZM 229.0 and head towards the NDB.....				008deg	98.5NM	00+38
	To HP. Turn right to 036deg and follow the OB (216deg) bearing from ZM. 15mins after station passage ZM retune the ADF to HP 328.0. Tune Nav1 to runway 20 ILS 109.30, and set the OBS to 198deg. Tune Nav2 to HPE 112.80. Start your descent to 2,000ft and slow to 120kts when the Nav2 DME reads 25NM....				036deg	76.4NM	00+30
	Approach: To runway. Commence a procedure turn. Make a right turn to 063deg and fly Hdg for one minute. Make a left 180deg turn to 243deg. When you can see the runway turn left to runway Hdg 198deg for a visual or ILS approach..... Land – Hanamaki runway 20 Length – 6,567ft. Width – 148ft. Surface – Asphalt				Final Hdg 198deg	10.6NM	00+06
Flight No. 813-02-44	Arrival Airport Elev. – 295ft.			Estimated totals for this flight>>>		272.0NM	01+50

Saturday 16th November

Today's leg is the last in Japan. Japan literally means "Origin of Sun" and hence its common name of the "Land of the Rising Sun". The Japanese name *Nippon* is used on stamps and for international sporting events, while *Nihon* is used more often within Japan. It is from the Chinese version of the name that the English *Japan* was derived. The early Mandarin Chinese word for Japan was recorded by Marco Polo as *Cipangu*. In Malay, the Chinese word became *Japang* and was thus encountered by Portuguese traders in Moluccas in the 16th century. It is thought the Portuguese traders were the first to bring the word to Europe. It was first recorded in English in 1577 spelled *Giapan*.

Originally, the emperors were the nominal rulers of Japan, but actual power was usually held by powerful court nobles, regents, or *Shoguns* (military governors). Ancient political structure held that, once battles between rivals were finished, the victorious Shogun would migrate to the capital Heian (now Kyoto) to rule under the grace of the Emperor. However, in 1185, general Minamoto no Yoritomo was the first to break this tradition, by refusing to relocate and subsequently holding power in Kamakura, just south of present-day Yokohama. Japan soon fell into warring factions, and suffered through what became known as the Warring States or Sengoku Period. During the 16th century, traders from Portugal, the Netherlands, England, and Spain arrived, as did Christian missionaries. During the early part of the 17th century, Japan's shogunate suspected that they were actually forerunners of a military conquest by European powers and ultimately barred all relations with the outside world except for severely restricted contacts with Dutch and Chinese merchants at Nagasaki. This isolation lasted for 251 years, until Commodore Matthew Perry forced the opening of Japan to the West with the Convention of Kanagawa in 1854.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 20	Init. Hdg – 023deg.	Init. Alt – 7,500ft	Apt Elev. – 295ft.			
Hanamaki (RJSI) Japan To Nakashibetsu (RJCN) Japan	Departure: To JC. Tune the ADF to JC 381.0 and after take off make a standard rate right turn to 023deg. Start your climb towards 7,500ft and head towards the NDB, which you will pick up shortly after take off.....				023deg	74.1NM	00+31
	Enroute: To OH. Turn right to 036deg and follow the OB (216deg) bearing from JC. When you lose the signal from JC, retune the ADF to OH 239.0, which you will receive after a few mins, and head towards the NDB.....				036deg	158.9NM	01+01
	To KQ. Turn right to 080deg and follow the OB (260deg) bearing from OH. 4 mins after station passage OH retune the ADF to KQ 221.0 and head toward the NDB.....				080deg	45.8NM	00+18
	To NS. Turn left to 057deg, follow the OB (237deg) bearing from KQ and after 1 min start your descent to 2,900ft. 5mins after station passage KQ retune the ADF to NS 265.0 and head towards the NDB. Tune Nav1 to runway 8 ILS 110.30, and set the OBS to 080deg.....				057deg	35.1NM	00+14
	Approach: To runway. Turn right to runway Hdg 080deg and make a visual or ILS approach to the runway Land – Nakashibetsu runway 8 Length – 6,552ft. Width – 148ft. Surface – Asphalt				080deg	9.3NM	00+05
Flight No. 813-02-45	Arrival Airport Elev. – 213ft.				Estimated totals for this flight>>>		323.2NM 02+09

Sunday 17th November

Today's leg takes us over the Kuril Islands, which were discovered in 1634 by the Dutch navigator Martin de Vries. The Kurils were originally settled by the Russians, following their exploration in the 17th and 18th centuries. In 1855, however, Japan seized a group of the southern islands and in 1875 took possession of the entire chain. In 1945, as part of the Yalta agreements, some of the islands were ceded to the Soviet Union, and the Japanese population was repatriated and replaced by Soviets. Japan still claims historical rights to the southernmost islands and has tried repeatedly to persuade the Soviet Union and, from 1991, Russia to return the islands to Japanese sovereignty. The failure to resolve the impasse has been a major obstacle in Russo-Japanese relations since the end of the war. Since the end of the war, Japan and Russia have still not signed a peace treaty ending the conflict between the two countries.

The chain is part of the belt of geologic instability circling the Pacific and contains at least 100 volcanoes, of which 35 are still active, and many hot springs. Earthquakes and tidal waves are common; the tidal wave of 1737 attained a height of 210 feet (64 m), one of the highest on record. Parallel to the chain, in the Pacific floor, is the Kuril Trench, which reaches a depth of more than 6.5 miles (10.5 km).

From - To	Flight Description. "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	REAL WEATHER IS NOT RECOMMENDED FOR THIS HOP. I SUGGEST THAT YOU CLEAR ALL WEATHER AND SET THE VISIBILITY TO "UNLIMITED".						
	Dep. Rwy – 8	Init. Hdg – 080deg.	Init. Alt – 13,500ft	Apt Elev. – 213ft.			
Nakashibetsu (RJCN) Japan To Petropavlovsk-Kamchatsk (UHPP) Russia	Departure: To Fix 03. Tune Nav1 to NSE VOR/DME 115.60 and set the OBS to 080deg. After take off make a slight left turn and when the OBS needle centres turn right to 080deg and follow the OBS needle. Start your climb towards 13,500ft and head towards the right hand side of the island that you see in front of you. The waypoint is reached when the DME reads 28.0NM, when you should turn left and head up the right hand side of the island.....				080deg	28.6NM	00+14
	Enroute: Always head up the right hand side of any landmass (i.e. keep the land on your left). On a couple of occasions, you may see two possible islands to head for – always choose the island to your right. To Fix 16. The entire enroute section of this leg is VFR only. The route hops from one island to the next, if you are getting to the end of an island and you can't see the next one, make sure you look a little to the left and right rather than just staring in front of you. Tune the ADF to PR 535.0, the waypoint is reached when the RMI reads 016deg.....				Av C'se 048deg	721.9NM	03+16
	Approach: To PR. Turn left to 016deg, head towards the NDB, and commence your descent to 1,100ft..... To runway. Turn left to runway Hdg 345deg and make a visual approach to the runway Land – Yelizovo runway 34R Length – 11,082ft. Width – 197ft. Surface – Concrete				016deg 345deg	79.1NM 2.8NM	00+31 00+01
Flight No. 813-02-46	Arrival Airport Elev. – 131ft. Estimated totals for this flight>>>					832.4NM	05+02

Monday 18th November

Today's leg takes us over the Bering Sea. This, and the Bering Strait were first explored by Russian ships under Semyon Dezhnyov, in 1648. They are named for Vitus Bering, a Danish captain who was taken into Russian service by Peter the Great, in 1724. He sailed into the strait four years later but did not see the Alaskan coast, although he discovered the islands of St. Lawrence and Diomedé. In 1730, the strait was charted for the first time by Mikhail Gvozdev and Ivan Fyodorov. Bering sailed again in 1733, leading a large expedition from St. Petersburg along the northern coast of Siberia, and he reached the Gulf of Alaska in the summer of 1741. He explored the south-western coast of mainland Alaska, the Alaska Peninsula, and the Aleutians, but misfortune befell him, and he perished in that year along with many of his men.

The Bering Strait is a relatively shallow passage averaging 100 to 165 feet (30 to 50 metres) in depth. During the Ice Age, the sea level fell by several hundred feet, making the strait into a land bridge between the continents of Asia and North America, over which a considerable migration of plants and animals occurred.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 34R	Init. Hdg – 142deg.	Init. Alt – 9,500ft	Apt Elev. – 131ft.			
Petropavlovsk- Kamchatsk (UHPP) Russia To Shemya (PASY) United States	Departure: To HY. Tune the ADF to HY 685.0 and after take off make a standard rate right turn to 142deg. Start your climb towards 9,500ft and head towards the NDB. Tune Nav2 to SYA VORTAC 109.00 and set the OBS to 092deg.....				142deg	19.6NM	00+10
	Enroute: To SYA. Turn left to 092deg and follow the OB (272deg) bearing from HY. You need to make a precise departure from HY if you want to get to SYA in one piece. However, the SYA VORTAC does have a range of 195NM, so you should be able to pick it up even if you drift a bit off course. When you receive the VOR signal on Nav2 pick up the 092deg radial. Start your descent to 1,100ft when the DME reads 50NM. Tune Nav1 to runway 28 ILS 110.10, and set the OBS to 284deg. Slow to 120kts.....				092deg	552.5NM	03+28
	Note that FSNV gives a heading of 083deg. As explained in Peter Tucker's marvellous "Long-Range Navigation with Limited Facilities" notes, this is the initial heading for a Great Circle route.						
	Approach: To Fix 03. Turn right to runway reciprocal 104deg and fly heading for 2min 30sec..... To runway. Commence a procedure turn. Make a right 45deg turn to 149deg and fly Hdg for one minute. Make a left 180deg turn to 329deg. When you can see the runway turn left to runway Hdg 284deg for a visual or ILS approach..... Land – Eareckson AS runway 28 Length – 10,027ft. Width – 150ft. Surface – Asphalt				104deg Final Hdg 284deg	5.0NM 7.7NM	00+03 00+04
Flight No. 813-02-47	Arrival Airport Elev. – 98ft.				Estimated totals for this flight>>>		584.8NM 03+45

Tuesday 19th November

The island of Shemya was constructed as a strategic American base during the Second World War and was used for raids against Northern Japan. The runways were built in very difficult conditions between 30th May and 21st June 1943 during the final days of the battle to retake nearby island of Attu from the Japanese.

The island has a number of black volcanic rocks that are very dense and black – and give rise to Shemya's nickname of 'the Black Pearl of the Aleutians'. There have been two major earthquakes on Shemya. The first, measuring 8.7 on the Richter scale, occurred on 3 February 1965 and was centred at the nearby Rat Islands. It was followed by severe after shocks and a 10.7-meter tsunami. Damage, however, was limited to cracks in the taxiways. The second earthquake, measuring 7.6 on the Richter scale, occurred on 1 February 1975, and caused a large amount of damage to both the runways and hangars.

During the “Cold War”, Shemya was the base for sophisticated monitoring equipment to spy on Soviet naval vessels sailing from Petropavlosk-Kamchatskii.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 28	Init. Hdg – 103deg.	Init. Alt – 9,500ft	Apt Elev. – 98ft.			
Shemya (PASY) United States To Adak Island (PADK) United States	Departure: To Fix 03. Tune Nav1 to SYA VORTAC 109.00 and set the OBS to 093deg. After take off make a standard rate right turn to 103deg, and start your climb towards 9,500ft. Waypoint reached when the OBS needle centres.....				103deg	9.0NM	00+05
	Enroute: To ADK. Turn left to 093deg and follow the OB (273deg) bearing from SYA. Again, you need to make a precise departure from SYA if you want to get to ADK in one piece. Tune the ADF to ADK 530.0, and Nav2 to NUD DME 113.00, and when you lose the signal from SYA, retune Nav1 to runway 23 ILS 108.90, and set the OBS to 232deg. When the ADF picks up the NDB head towards ADK, start your descent to 1,500ft and slow to 120kts. There are some hills on the approach, so keep a sharp lookout..... Note that FSNav gives a heading of 087deg. As explained in Peter Tucker’s marvellous “Long-Range Navigation with Limited Facilities” notes, this is the initial heading for a Great Circle route.				093deg	337.3NM	02+09
	Approach: To Fix 04. Turn left to runway reciprocal 052deg and fly heading for 3mins..... To runway. Commence a procedure turn. Make a right 45deg turn to 097deg and fly Hdg for one minute. Make a left 180deg turn to 277deg. When you can see the runway turn left to runway Hdg 232deg for a visual or ILS approach..... Land – Adak runway 23 Length – 7,777ft. Width – 200ft. Surface – Asphalt				052deg Final Hdg 232deg	6.0NM 9.4NM	00+03 00+05
	Flight No. 813-02-48				Arrival Airport Elev. – 16ft.		Estimated totals for this flight>>>
						361.7NM	02+22

Wednesday 20th November

Today's leg takes us to Dutch Harbor (Unalaska) which was the scene of the less well-known attack by Japanese forces on the USA. In May 1942, Imperial Guard Headquarters in Tokyo ordered an attack on the Midway Islands, with the dual mission to occupy those islands and destroy the remnants of the US Pacific Fleet. An attack on the Aleutians was planned to divert American attention from Midway. However, the US had broken the Japanese codes, and was alert to the forthcoming attacks and Dutch Harbor was notified that the Japanese would attack sometime between June 1 and June 10. The attack was carried out on June 3rd by a force consisting of the aircraft carriers *Ryujo* and *Junyo* (which had 40 fighters and 42 bombers), the heavy cruisers *Takao* and *Maya*, and three destroyers. During the two days of air attacks 43 Americans lost their lives, however, one Japanese Zero did not return to the *Ryujo*, making a forced landing on Akutan. This provided the Americans with their first opportunity to study this excellent airplane and the opportunity to redesign its own fighters.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	REAL WEATHER IS NOT RECOMMENDED FOR THIS HOP. I SUGGEST THAT YOU CLEAR ALL WEATHER AND SET THE VISIBILITY TO "UNLIMITED".						
	Dep. Rwy – 23	Init. Hdg – 052deg.	Init. Alt – 13,500ft	Apt Elev. – 16ft.			
Adak Island (PADK) United States To Unalaska (PADU) United States	Departure: To Fix 03. Tune the ADF to ADK 530.0, and Nav1 to DUT DME 113.90. After take off make a standard rate left turn to 052deg, and start your climb towards 13,500ft. The waypoint is reached when the RMI reads 251deg.....				052deg	5.5NM	00+03
	Enroute: To Fix 06. Turn right to 071deg and follow the OB (251deg) bearing from NUD over the chain of islands. The remainder of the enroute section is VFR only. The route hops from one island to the next, if you are getting to the end of an island and you can't see the next one, make sure you look a little to the left and right rather than just staring in front of you.....				Av C'se 062deg	279.2NM	01+43
	To Fix 07. When the DME reads 112NM you will be approaching a large, long island. Turn left to 029deg and follow the left hand coast (i.e. keep the island on your right). Keep on this heading and aim to cross the end of the headlands that you can see in front of you. Retune the ADF to DUT 283.0.....				029deg	53.2NM	00+19
	To Fix 08. When the ADF picks up the NDB start your descent to 1,000ft, turn right to 055deg and head towards the NDB.....				055deg	24.5NM	00+09
	To Fix 09. When the DME reads 40NM, turn left to 036deg and aim to pass the seaward side the headland that you can see in front of you.....				036deg	32.0NM	00+13
	Approach: To Fix 11. Continue to closely follow the coastline – don't cut across any bays you see as you may finish up on the wrong island, or miss the aerodrome. When your heading passes 120deg, start to configure the aeroplane for landing from short finals..... To runway. When the RMI reads 125deg turn left to 120deg for a visual approach..... Land – Unalaska runway 12 Length – 3,896ft. Width – 100ft. Surface – Asphalt				Av C'se 102deg 120deg	16.7NM 3.3NM	00+07 00+02
Flight No. 813-02-49	Arrival Airport Elev. – 22ft. Estimated totals for this flight>>>					414.4NM	02:36

Thursday 21st November

We continue along the Aleutian Islands, which are part of the "Ring of Fire", which is a nearly continuous chain of volcanoes surrounds the Pacific Ocean. 75% of the worlds volcanoes are within this zone.

Volcanoes have always been highly dangerous as is illustrated by this warning dated Jan. 16 1632, which was found in Portici, Italy, carved in stone:

"Vesuvius burst into flames, always with huge extermination of those who hesitated. I warn you so that it does not find you undecided, this mountain has its womb heavy with pitch ... if you are wise listen to the voice of this stone."

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 12	Init. Hdg – 024deg.	Init. Alt – 9,500ft	Apt Elev. – 22ft.			
Unalaska (PADU) United States To Sand Point (PASD) United States	Departure: To Fix 02. Tune the ADF to DUT 283.0, and Nav1 to CDB VORTAC 112.60, and set the OBS to 041deg. After take off make a sharp left turn to 024deg, and start your climb towards 9,500ft. The waypoint is reached when the RMI reads 221deg.....				026deg	6.2NM	00+03
	Enroute: To CDB. Turn right to 041deg and follow the OB (221deg) bearing from DUT until you start to receive the VOR signal from CDB. Tune the ADF to HBT 390.0, and follow the Nav 1 OBS to DUT.....				041deg	149.7NM	00+59
	To HBT. Turn right to 070deg, and reset the Nav1 OBS needle to 070deg. When the DME reads 25NM commence your descent to 1,500ft. When the ADF picks up the NDB head towards HBT and slow to 120kts.....				070deg	77.1NM	00+30
	Approach: To Fix 03. Turn right to runway reciprocal 133deg and fly heading for 2mins.....				133deg	4.0NM	00+02
	To runway. Commence a procedure turn. Make a right 45deg turn to 178deg and fly Hdg for one minute. Make a left 180deg turn to 358deg. When you can see the runway turn left to runway Hdg 313deg for a visual approach..... Land – Sand Point runway 31 Length – 3,992ft. Width – 150ft. Surface – Asphalt				Final Hdg 313deg	9.2NM	00+05
Flight No. 813-02-50	Arrival Airport Elev. – 19ft.				Estimated totals for this flight>>>		246.2NM 01+39

Friday 22nd November

Today's leg takes us to Kodiak Island, which was discovered in 1763 by Stephan Glotov, a Russian fur trader, and was originally known as Kikhtak (Eskimo: "Island"), it was renamed Kadiak in 1890 and Kodiak in 1901. The first settlement was made in 1784 by Grigory Shelekhov at Three Saints Bay, on the island's south-eastern part. During the 19th century, the island was a base for seal and sea otter hunting and whaling. Russian control ended in 1867 and in the early 1900s the U.S. Department of Agriculture established an experimental cattle station, but the eruption in 1912 of Novarupta Volcano near Mount Katmai blanketed the island with ash and interrupted agricultural activities. In 1964 a violent earthquake lowered the island by 5 to 6 feet (1.5 to 1.8 m), resulting in seismic waves that caused widespread devastation.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 12	Init. Hdg – 042deg.	Init. Alt – 9,500ft	Apt Elev. – 19ft.			
Sand Point (PASD) United States To Kodiak (PADQ) United States	Departure: To Fix 02. Tune the ADF to HBT 390.0. After take off make a standard rate right turn to 042deg, and start your climb towards 9,500ft. The waypoint is reached when the RMI reads 214deg.....				042deg	6.0NM	00+03
	Enroute: To Fix 04. Turn left to 033deg and follow the OB (213deg) bearing from HBT. When you lose the NDB signal continue to follow the coastline and retune the ADF to PDN 371.0. The waypoint is reached when the RMI reads 250deg.....				033deg	158.0NM	01+03
	To RWO. Turn right to 048deg, retune the ADF to RWO 394.0, and tune Nav1 to runway 25 ILS 110.90, and set the OBS to 250deg. When the ADF picks up the NDB head towards RWO and commence your descent to 5,000ft.....				048deg	148.7NM	00+57
	Approach: When you are clear of the hills descend to 1,400ft slow to 120kts, over fly the aerodrome to RWO..... To runway. Commence a procedure turn. Make a left turn to 035deg and fly Hdg for one minute. Make a right 180deg turn to 215deg. When you can see the runway turn right to runway Hdg 250deg for a visual or ILS approach..... Land – Kodiak runway 25 Length – 7,546ft. Width – 150ft. Surface – Asphalt				048deg Final Hdg 250deg	10.8NM	00+05
Flight No. 813-02-51	Arrival Airport Elev. – 72ft.				Estimated totals for this flight>>>		323.5NM 02+08

Saturday 23rd November

Today's leg takes us to Anchorage, which was founded in 1914 as the headquarters of the Alaska Railroad running north to Fairbanks. It became a key aviation and defence centre with the construction of Fort Richardson and Elmendorf Air Force Base during World War II. Subsequently, it became a regular stop on air routes from Europe and the United States to East Asia. On March 27, 1964, a severe earthquake caused a number of deaths and extensive property damage in the city.

On Saturday July 8, 2000, Anchorage International Airport was renamed in honour of Alaska's senior United States Senator, Ted Stevens, to the "Ted Stevens Anchorage International Airport". Stevens was a pilot in the China-Burma-India theatre of World War II, supporting the Flying Tigers of the 14th U.S. Air Force. He received two Distinguished Flying Crosses, two Air Medals, and the Yuan Hai medal awarded by the Republic of China.

From - To	Flight Description. "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 25	Init. Hdg – 044deg.	Init. Alt – 9,500ft	Apt Elev. – 72ft.			
Kodiak (PADQ) United States To Anchorage (PANC) United States	Departure: To RWO. Tune the ADF to RWO 394.0. After take off make a very steep left turn to 044deg to avoid the hill in front of you. Head for the NDB.....				044deg	9.6NM	00+05
	Enroute: To ACE. Turn left to 349deg and follow the OB (169deg) bearing from RWO. When you lose the NDB signal from RWO retune the ADF to ACE 277.0 and head towards the NDB.....				349deg	114.9NM	00+45
	To IWW. Turn left to 344deg, retune the ADF to IWW 379.0 and head towards the NDB.....				344deg	58.1NM	00+22
	To CMQ. Turn right to 020g, retune the ADF to CMQ 338.0.. Tune Nav1 to runway 14 ILS 111.75, and set the OBS to 140deg. Start your descent to 1,700ft, and slow to 120kts.....				020deg	48.3NM	00+19
	Approach: To Fix 04. Turn left to runway reciprocal 320deg and fly heading for 3mins..... To runway. Commence a procedure turn. Make a left 45deg turn to 275deg and fly Hdg for one minute. Make a right 180deg turn to 095deg. When you can see the runway turn right to runway Hdg 140deg for a visual or ILS approach Land – Stevens Anchorage Intl runway 14 Length – 11,555ft. Width – 150ft. Surface – Asphalt				320deg Final Hdg 140deg	6.0NM 10.5NM	00+03 00+05
Flight No. 813-02-52	Arrival Airport Elev. – 150ft.					247.4NM	01+39

Sunday 24th November

Today's leg takes us over the port of Valdez, which is the northernmost all-year port in North America. Formerly known as Copper City, it was named in 1898 for its harbour, which was explored and named by the Spaniards in 1790, when it became a gateway for the Yukon goldfields. It is a port of entry and the southern terminal for the trans-Alaskan pipeline from Prudhoe Bay. After it was severely damaged in 1964 by the Alaskan earthquake, the town was rebuilt 5 miles (8 km) west on safer ground.

Valdez was the principal settlement affected when the oil tanker *Exxon Valdez* ran aground in Prince William Sound on March 24, 1989, in what was the largest oil spill in U.S. history.

From - To	Flight Description. "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 14	Init. Hdg – 320deg.	Init. Alt – 11,500ft	Apt Elev. – 150ft.			
Anchorage (PANC) United States To Cordova (PACV) United States	Departure: To get sufficient altitude to clear the local hills, you will need to make a climbing circuit of the aerodrome.						
	To Fix 03. Tune the ADF to CMQ 338.0. After take off make a standard rate right turn to 320deg and fly heading for 3 mins and start your climb towards 11,500ft.....				320deg	10.0NM	00+07
	Enroute: To Fix 05. Make a standard rate right turn to 091deg. The waypoint is reached when the RMI reads 244deg.....				091deg	11.1NM	00+05
	To MNL. Turn left to 064deg and follow the OB (244deg) bearing from CMQ. When you lose the CMQ NDB, tune the ADF to MNL 524.0, and head towards the NDB.....				064deg	97.8NM	00+38
	To Fix 06. Turn right to 144deg, retune the ADF to HBK 362.0, head towards the NDB and commence a 700FPM descent to 3,000ft. When you are established on course retune the ADF to GCR 404.0. The waypoint is reached when the RMI reads 085deg.....				144deg	29.6NM	00+12
	To GCR. Turn left to 085deg and head towards GCR. Tune Nav 1 to runway 27 ILS 110.70, and set the OBS to 268deg. When the DME reads 5.5NM start your descent to 1,600ft and slow to 120kts.....				085deg	22.4NM	00+09
	Approach: To Fix 07. Turn to runway reciprocal 088deg and fly heading for 2mins.....				088deg	4.0NM	00+02
	To runway. Commence a procedure turn. Make a right 45deg turn to 133deg and fly Hdg for 1min 30secs. Make a left 180deg turn to 313deg. When you can see the runway turn left to runway Hdg 268deg for a visual or ILS approach.				Final Hdg 268deg	10.7NM	00+06
Land – Cordova-Smith runway 27 Length – 7,479ft. Width – 150ft. Surface – Asphalt							
Flight No. 813-02-53	Arrival Airport Elev. – 42ft. Estimated totals for this flight>>>					185.6NM	01+19

Monday 25th November

Cordova (originally Puerto Cordova) was initially explored by the Spaniards in 1792. It was founded in the 1900s as a port for the Copper River and North-western Railroad, which served the Kennecott Copper Company mines, which ceased operations 1938. The city was damaged by the severe earthquake of March 27, 1964.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 27	Init. Hdg – 081deg.	Init. Alt – 11,500ft	Apt Elev. – 42ft.			
Cordova (PACV) United States To Gustavus (PAGS) United States	Departure: To Fix 03. Tune the ADF to GCR 404.0. After take off make a standard rate left turn to 081deg and start your climb towards 11,500ft. The waypoint is reached when the RMI reads 277deg.....				081deg	8.5NM	00+04
	Enroute: To Fix 04. Turn right to 097deg and follow the OB (277deg) bearing from GCR. The waypoint is when you pass over the final headland.....				097deg	51.1NM	00+22
	To CYT. Turn left to 054deg, retune the ADF to CYT 209.0 and head towards the NDB.....				054deg	43.5NM	00+16
	To OCC. Turn right to 082deg, retune the ADF to OCC 385.0. You will pick up the NDB after a few minutes when you should head towards the NDB.....				082deg	89.4NM	00+32
	To Fix 05. Turn left to 074deg and follow the OB (254deg) bearing from OCC. Tune Nav1 to VORTAC SSR 114.00, and set the OBS to 106deg. The waypoint is reached when the OBS needle centres.....				074deg	71.4NM	00+26
	To GAV. Turn right to 106deg, retune the ADF to GAV 219.0 and head towards the NDB. Start your descent to 1,500ft and slow to 120kts when Nav1 DME reads 72NM.....				106deg	74.6NM	00+29
	Approach: To Fix 06. Turn to runway reciprocal 108deg and fly heading for 2mins.....				108deg	4.0NM	00+02
	To runway. Commence a procedure turn. Make a right 45deg turn to 153deg and fly Hdg for one minute. Make a left 180deg turn to 333deg. When you can see the runway turn left to runway Hdg 288deg for a visual approach				Final Hdg 288deg	9.1NM	00+05
Land – Gustavus runway 28 Length – 6,710ft. Width – 150ft. Surface – Asphalt							
Flight No. 813-02-54	Arrival Airport Elev. – 32ft.				Estimated totals for this flight>>>		351.6NM 02+16

Tuesday 26th November

Today's leg takes us to Prince Rupert, which was named in 1906 after Prince Rupert, the first governor of the Hudson's Bay Company. It began as a tent town and developed after 1914 as the terminus of the Grand Trunk Pacific Railway (later the Canadian National Railway). In the 1970s, it became the western terminus of the Yellowhead Highway from Edmonton, Alta. During World War II, Prince Rupert served as a marshalling and supply base for Allied forces in the Aleutians and the mid-Pacific.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 28	Init. Hdg – 107deg.	Init. Alt – 9,500ft	Apt Elev. – 32ft.			
Gustavus (PAGS) United States To Prince Rupert (CYPR) Canada	Departure: To EEF. Tune the ADF to EEF 391.0. After take off make a standard rate left turn to 107deg, start your climb towards 9,500ft and head towards the NDB.....				107deg	24.2NM	00+12
	Enroute: To AFE. Turn right to 122deg and follow the OB (302deg) bearing from EEF. 20mins after station passage EEF retune the ADF to AFE 223.0, and head towards the NDB.....				122deg	84.4NM	00+32
	To SQM. Turn left to 112deg, retune the ADF to SQM 529.0 and head towards the NDB.....				112deg	40.2NM	00+15
	To CMJ. Turn right to 119deg and follow the OB (299deg) bearing from SQM. 5mins after station passage SQM retune the ADF to CMJ 396.0, and head towards the NDB.....				119deg	82.0NM	00+31
	To ICK. Turn right to 144deg, retune the ADF to ICK 266.0 and head towards the NDB.....				144deg	16.8NM	00+06
	To Fix 03. Turn left to 113deg, and follow the OB (293deg) bearing from ICK. Start your descent to 1,700ft and tune Nav1 to runway 13 ILS 109.70, and set the OBS to 128deg				113deg	56.7NM	00+23
	Approach: To runway. When you can see the runway turn right to runway Hdg 128deg for a visual or ILS approach ... Land – Prince Rupert runway 13 Length – 6,046ft. Width – 200ft. Surface – Asphalt				128deg	5.0NM	00+03
Flight No. 813-02-55	Arrival Airport Elev. – 114ft.			Estimated totals for this flight>>>		309.3NM	02+02

Wednesday 27th November

Today's leg takes us to Port Hardy, which is situated on Vancouver Island, and was first discovered by Captain James Cook in 1778 during his unsuccessful search for the Northwest Passage around the top of Canada. A few months later, in a brief fracas with Hawaiians over the stealing of a cutter, Cook was slain on the beach at Kealahakua by the Polynesian natives.

The island was surveyed in 1792 by George Vancouver and was held by the Hudson's Bay Company until it was made a British crown colony in 1849. In 1866 it was united with the mainland colony of British Columbia, which in 1871 entered the Dominion of Canada as a province, with Victoria, the island's chief city, as the provincial capital.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 13	Init. Hdg – 128deg.	Init. Alt – 9,500ft	Apt Elev. – 114ft.			
Prince Rupert (CYPR) Canada To Port Hardy (CYZT) Canada	Departure: To PR. Tune the ADF to PR 218.0. After take off, head directly to PR, and start your climb towards 9,500ft				128deg	2.0NM	00+01
	Enroute: To MS. Turn to 129deg and follow the OB (309deg) bearing from PR. When you lose the signal from PR, retune the ADF to MS 388.0, and head towards the NDB.....				129deg	134.7NM	00+54
	To Fix 01. Continue on 129deg and follow the OB (309deg) bearing from MS. 10mins after station passage MS retune the ADF to ZT 242.0, start your descent to 1,400ft and head towards the NDB. Tune Nav1 to runway 11 ILS 109.50, and set the OBS to 107deg				129deg	103.8NM	00+40
	Approach: To runway. When you can see the runway turn left to runway Hdg 107deg for a visual or ILS approach Land – Port Hardy runway 11 Length – 4,923ft. Width – 150ft. Surface – Asphalt				107deg	3.7NM	00+02
Flight No. 813-02-56	Arrival Airport Elev. – 72ft.					244.2NM	01+37

Thursday 28th November

The final part of today's leg takes us over Seattle's famous CN Tower. The Tower was built by Canadian National (CN) who wanted to demonstrate the strength of Canadian industry by building a tower taller than any other in the world. It was an ambitious project that involved 1,567 workers who worked 24 hours a day, five days a week for 40 months to completion, and was opened to the public on June 26, 1976.

The tower has a height of 1,815ft (553m) and is the tallest free standing structure in the world.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 11	Init. Hdg – 095deg.	Init. Alt – 9,500ft	Apt Elev. – 72ft.			
Port Hardy (CYZT) Canada To Seattle (KSEA) United States	Departure: To YBL. Tune the ADF to ZT 242.0. After take off, turn left to 095deg, follow the OB (275deg) bearing from ZT, and start your climb towards 9,500ft. 20mins after take off retune the ADF to YBL 203.0 and head towards the NDB.....				095deg	87.2NM	00+37
	Enroute: To QQ. Turn right to 112deg, retune the ADF to QQ 400.0 and head towards the NDB.....				112deg	21.6NM	00+08
	To YCD. Turn left to 110deg, retune the ADF to YCD 251.0 and head towards the NDB.....				110deg	56.6NM	00+21
	To YJ. Turn right to 126deg, retune the ADF to YJ 200.0 and head towards the NDB. Tune Nav1 to CVV VOR/DME 117.20 and set the OBS needle to 111deg.....				126deg	34.5NM	00+13
	To CVV. Turn left to 111deg and follow the OBS needle to CVV. Retune the ADF to SZ 281.0.....				111deg	36.0NM	00+13
	To SZ. Turn right to 138deg, and start your descent to 1,600ft. When you pick up the NDB head towards SZ. Tune Nav1 to runway 34R ILS 110.30, and set the OBS to 341deg				138deg	45.9NM	00+18
	Approach: To ODD. Turn right to 161deg, retune the ADF to ODD 224.0, slow to 120kts and head towards the NDB... To runway. Commence a procedure turn. Make a right 45deg turn to 206deg and fly Hdg for one minute. Make a left 180deg turn to 026deg. When you can see the runway turn left to runway Hdg 341deg for a visual or ILS approach				161deg Final Hdg 341deg	10.1NM 9.4NM	00+05 00+05
Land – Seattle-Tacoma Intl runway 34R Length – 11,894ft. Width – 150ft. Surface – Asphalt							
Flight No. 813-02-57	Arrival Airport Elev. – 429ft.			Estimated totals for this flight>>>		301.3NM	02+00

Friday 29th November

Shortly after take off, we pass over the Tacoma Narrows Bridge. The original bridge was nicknamed Galloping Gertie because of its constant rocking and twisting in the wind. These oscillations became so great that on the morning of November 7th 1940, four months after its opening, a support cable near the middle of the bridge snapped, causing the entire structure to crash into the river below. An investigation disclosed that the section formed by the roadway and stiffening-plate girders did not absorb the turbulence of wind gusts; and at the same time, the narrow, two-lane roadway gave the span a high degree of flexibility. This combination made the bridge highly vulnerable to aerodynamic forces, which were insufficiently understood at the time. The failure, which took no lives because the bridge was closed to traffic in time, spurred aerodynamic research and led to important advances. The plate girder was abandoned in suspension-bridge design and the Tacoma Narrows Bridge was replaced in 1950 by a new span, which was stiffened with a web truss

Currently a new suspension bridge is being built parallel to and south of the existing bridge. The new bridge is also designed to accommodate a second deck if required in the future. The new Tacoma Narrows Bridge is scheduled to open in 2007.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 34R	Init. Hdg – 340deg.	Init. Alt – 9,500ft	Apt Elev. – 429ft.			
Seattle (KSEA) United States To North Bend (KOTH) United States	Departure: To SZ. Tune the ADF to SZ 281.0. After take off continue on runway heading and show the staff at Boeing what a real aeroplane looks like!!.....				340deg	6.1NM	00+03
	Enroute: To GR. Turn left to 184deg, retune the ADF to GR 216.0, start your climb to 9,500ft and head towards the NDB.....				184deg	26.9NM	00+13
	To TDO. Turn left to 173deg, and retune the ADF to TDO 219.0, which you will start to receive after a few minutes. Head towards the NDB.....				173deg	41.4NM	00+16
	To PEN. Turn right to 218deg, retune the ADF to PEN 201.0 and head towards the NDB.....				218deg	37.8NM	00+14
	To TKW. Turn left to 177deg, and retune the ADF to TKW 271.0, which you will start to receive after a few minutes. Head towards the NDB.....				177deg	40.9NM	00+15
	To ON. Turn left to 171deg and retune the ADF to ON 350.0. Follow along the coastline until you pick up ON. Head towards the NDB.....				171deg	49.3NM	00+18
	To OT. Turn to 170deg, retune the ADF to OT 378.0 and start your descent to 1,200ft. Follow along the coastline until you pick up OT. Head towards the NDB and slow to 120kts. Tune Nav1 to runway 4 ILS 108.50, and set the OBS to 042deg.....				170deg	77.6NM	00+30
	Approach: To runway. Commence a procedure turn. Make a right turn to 177deg and fly Hdg for one minute. Make a right 180deg turn to 357deg. When you can see the runway turn right to runway Hdg 042deg for a visual or ILS approach Land – North Bend Mun runway 4 Length – 5,314ft. Width – 150ft. Surface – Asphalt				Final Hdg 042deg	7.9NM	00+04
Flight No. 813-02-58	Arrival Airport Elev. – 16ft. Estimated totals for this flight>>>					287.9NM	01+53

Saturday 30th November

The City of North Bend was originally called Snoqualmie (after the local river) in 1889. The community later became known as Mountain View and finally, due to the location near the bend toward the North of the South Fork River, became the Town of "North Bend".

North Bend was where the impossible-to-explain David Lynch show "Twin Peaks" was filmed. Twin Peaks premiered on April 8, 1990 on ABC, and spawned two seasons of strange shows and a follow-up movie in 1992.

From - To	Flight Description. "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM	
	Dep. Rwy – 4	Init. Hdg – 178deg.	Init. Alt – 5,500ft	Apt Elev. – 16ft.				
North Bend (KOTH) United States To Arcata-Eureka (KACV) United States	Departure: To Fix 03. Tune the ADF to OT 378.0. After take off make a standard rate right turn to 178deg and start your climb towards 5,500ft. Waypoint reached when the RMI reads 340deg.....				178deg	16.1NM	00+08	
	Enroute: To CEC. Turn left to 160deg, and follow the OB (340deg) bearing from OT. Tune Nav1 to CEC VORTAC 109.00 and set the OBS needle to 160deg. Follow the OBS needle after you receive the signal from CEC...				160deg	85.3NM	00+35	
	To CV. Turn left to 155deg, retune the ADF to CV 233.0 and head towards the NDB. Retune Nav1 to runway 32 ILS 109.50, and set the OBS to 315deg. Start your descent to 2,000ft and slow to 120kts when the DME reads 21.0NM.....				155deg	49.3NM	00+20	
	Approach: To Fix 04. Turn left to runway reciprocal 135deg and fly heading for 2mins.....				135deg	4.0NM	00+02	
	To runway. Commence a procedure turn. Make a right 45deg turn to 180deg and fly Hdg for one minute. Make a left 180deg turn to 000deg. When you can see the runway turn left to runway Hdg 315deg for a visual or ILS approach				Final Hdg 315deg	9.9NM	00+05	
	Land – Arcata runway 32				Length – 5,998ft.	Width – 150ft.	Surface – Asphalt	
Flight No. 813-02-59	Arrival Airport Elev. – 216ft.				Estimated totals for this flight>>>		164.6NM	01+10

Sunday 1st December

The final part of today's flight takes us to San Francisco. You pass over the Golden Gate Bridge, which before its completion in 1937, was considered impossible to build because of foggy weather, 60-mile-per-hour winds and strong ocean currents, which swept through the deep rugged canyon below. At a cost of \$35 million, the 1.2-mile bridge took more than four years to build and eleven men lost their lives during its construction. The book says that the colour of the bridge, known as International Orange, was chosen because it blends well with the bridge's natural surroundings. Personally, I think that it's a magnificent colour, but can't remember it blending in with the surroundings – perhaps I was looking the wrong way.

You also pass over Alcatraz (Spanish for pelican), which was originally named Isla de los Alcatraces after the birds that were the island's only inhabitants. The island served as a military fortification in the 1850s and an incarceration facility for war prisoners during the Spanish-American War. In 1934, Alcatraz became the infamous maximum-security prison for Mafia criminals and high-risk convicts. Famous island residents have included "Machine Gun" Kelly, Al Capone and Robert "Birdman" Stroud. Although the island is only a mile from shore, there is no evidence of any successful escapes across the icy waters of the bay. The island was a federal penitentiary until 1963, but is now a popular tourist attraction.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 32	Init. Hdg – 176deg.	Init. Alt – 5,500ft	Apt Elev. – 216ft.			
Arcata-Eureka (KACV) United States To San Francisco (KSFO) United States	Departure: To FOT. Tune Nav1 to FOT VORTAC 114.00 and set the OBS to 176deg. After take off make a standard rate left turn to 176deg, start your climb towards 5,500ft and follow the OBS needle to FOT.....				176deg	21.9NM	00+12
	Enroute: To ENI. Turn left to 139deg. Retune Nav1 to ENI VORTAC 112.30 and set the OBS to 139deg and follow the OBS needle to ENI.....				139deg	106.7NM	00+42
	To PYE. Turn right to 146deg. Retune Nav1 to PYE VORTAC 113.70 and set the OBS to 146deg and follow the OBS needle to PYE.....				146deg	61.4NM	00+24
	To Fix 03. Turn left to 126deg, reset the OBS and follow the OB (306deg) bearing from FOT. Tune the ADF to AK 341.0, and commence your descent to 1,600ft. Waypoint reached when the RMI reads 095deg.....				126deg	16.4NM	00+06
	To AK. Turn left to 095deg and head towards the NDB. Retune Nav1 to runway 28R ILS 111.70, and set the OBS to 282deg.....				095deg	23.4NM	00+11
	Approach: To SF. Turn right to 183deg, retune the ADF to SF 379.0 and head towards the NDB..... To runway. Turn right to runway Hdg 282deg for a visual or ILS approach Land – San Francisco Intl runway 28R Length – 11,861ft. Width – 200ft. Surface – Asphalt				183deg 282deg	9.4NM 5.3NM	00+05 00+03
Flight No. 813-02-60	Arrival Airport Elev. – 13ft.					244.5NM	01+43

Monday 2nd December

At San Francisco, we have caught up and overtaken Phileas Fogg who didn't arrive until 3rd December. Detective Fix at last got hold of an arrest warrant for Phileas Fogg, only to find that it was now out of date. He therefore resolved to do his best to help Phileas Fogg get back to England, so that he could arrest him there. Phileas Fogg and his companions left San Francisco on the Pacific Express train at 6 PM on 3rd December to start on their journey towards New York.

Our route to New York follows as closely as possible the route of the Union Pacific railway line. The first public proposal for such a line was made by the New York City merchant Asa Whitney in 1844, and in 1853 Congress expended \$150,000 in looking for a feasible route. However, it wasn't until 1863 that the Central Pacific began laying track eastward from Sacramento whilst the Union Pacific started westward from Omaha, Nebraska, two years later. To meet its manpower needs, the Central Pacific hired thousands of Chinese labourers, including many recruited from farms in Canton. The crew had the formidable task of laying the track crossing the rugged Sierra Nevada mountain range and had to blast nine tunnels to accomplish this. The crew of the Union Pacific, which was composed largely of Irish immigrants and Civil War veterans, had to contend with Indian attacks and the Rocky Mountains. On May 10, 1869, after completing 1,800 miles (2,900 km) of new track, the two rail lines met at Promontory, Utah, when Governor Leland Stanford drove the Golden Spike into a polished California laurel tie before an audience of some 3,000 government and railroad officials and track workers.

In 1942 the rails were taken up for war scrap and the Golden Spike drawn from where it had been driven 73 years before; the old railroad bed remains, and in 1957 the area was designated a national historic site.

From – To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 28R	Init. Hdg – 020deg.	Init. Alt – 11,500ft	Apt Elev. – 13ft.			
San Francisco (KSFO) United States To Winnemucca (KWMC) United States	Departure: To CC. Tune the ADF to CC 335.0. After take off make a standard rate right turn to 020deg, start your climb towards 11,500ft and head towards the NDB which you will start to receive soon after take off.....				020deg	33.2NM	00+17
	Enroute: To SA. Turn right to 027deg, retune the ADF to SA 356.0 and head towards the NDB.....				027deg	33.3NM	00+13
	To NO. Turn right to 035deg and follow the OB (215deg) bearing from SA. When you lose the SA NDB, tune the ADF to NO 351.0, which you will start to receive after about 15mins. Head towards NO.....				035deg	104.8NM	00+38
	To LLC. Turn right to 040deg and follow the OB (220deg) course from NO. Tune Nav1 to LLC VOR/DME 116.50 and set the OBS needle to 040deg. You will receive LLC about 3 mins after station passage NO. Follow the OBS needle to LLC.....				040deg	65.8NM	00+24
	To Fix 02. Turn left to 014deg, reset the Nav 1 OBS to 194deg and follow the OB 194deg course from LLC. Tune Nav 2 to INA VOR/DME 108.20 and set the OBS needle to 090deg. Commence your descent to 5,700ft when the Nav 1 DME reads 11NM. Waypoint reached when the Nav 2 OBS needle centres.....				014deg	56.0NM	00+21

	Approach: To INA. Turn right to 090deg and follow the Nav 2 OBS needle to INA..... To Fix 03. Turn right to runway reciprocal 143deg and fly heading for 2mins..... To runway. Commence a procedure turn. Make a right 45deg turn to 188deg and fly Hdg for one minute. Make a left 180deg turn to 008deg. When you can see the runway turn left to runway Hdg 323deg for a visual approach Land – Winnemucca Mun runway 32 Length – 7,002ft. Width – 100ft. Surface – Asphalt	090deg 143deg Final Hdg 323deg	6.8NM 4.0NM 8.8NM	00+03 00+02 00+04
Flight No. 813-02-61	Arrival Airport Elev. – 4,307ft.	Estimated totals for this flight>>>	312.7NM	02+02

Tuesday 3rd December

Today's leg takes us over the Bonneville Salt Flats, which was named after Captain Benjamin L. E. Bonneville who was the leader of an expedition in 1827.

The flats are, of course, famous for the numerous world land speed record attempts that were made there. The list gives some details as the record passed each 100 mph step.

Date	Driver	Speed	Location
18 December 1898	Count Gaston de Chasseloup-Laubat	39.24 mph	Paris, France
21 July 1904	Louis Emile Rigolly	103.55 mph	Ostend, Belgium
29 March 1927	Major Henry Seagrave	203.79 mph	Daytona Beach
3 September 1935	Malcolm Campbell	301.129 mph	Bonneville Salt Flats
5 August 1963	Craig Breedlove	407.45 mph	Bonneville Salt Flats
15 October 1964	Craig Breedlove	526.277 mph	Bonneville Salt Flats
15 November 1965	Craig Breedlove	600.601 mph	Bonneville Salt Flats
15 October 1997	Andy Green	763.035 mph	Black Rock Desert

From – To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 32	Init. Hdg – 023deg.	Init. Alt – 13,500ft	Apt Elev. – 4,307ft.			
Winnemucca (KMMC) United States To Salt Lake City (KSLC) United States	Departure: To gain sufficient altitude to clear the surrounding hills you will need to make a climbing circuit of the aerodrome. To Fix 01. Tune Nav 1 to INA VOR/DME 108.2 and set the OBS to 057deg. Tune Nav 2 to BQU VOR/DME 114.50 and set the OBS needle to 093deg. After take off continue on runway heading 023deg and start your climb towards 13,500ft. Waypoint reached when the Nav 1 DME reads 5.4NM.....				023deg	6.1NM	00+03
	To Fix 03. Make a standard rate left turn to 143deg. Waypoint reached when the Nav 1 OBS needle centres.....				143deg	6.8NM	00+03
	To INA. Make a standard rate left turn to 057deg and head towards INA.....				057deg	1.4NM	00+01
	Enroute: To Fix 04. Continue on 057deg and follow the OB OBS needle from INA. Waypoint reached when the Nav 2 OBS needle centres.....				057deg	38.5NM	00+15
	To BQU. Turn right to 093deg and head towards BQU.....				093deg	59.2NM	00+21
	To BVL. Turn left to 075deg, retune Nav 1 to BVL VORTAC 112.30, set the OBS to 075deg and follow the OBS needle to BVL.....				075deg	91.1NM	00+33
	To FFU. Turn right to 093deg, retune Nav 1 to FFU VORTAC 116.60, set the OBS to 093 deg and follow the OBS needle to FFU. Start your descent to 5,800ft when the DME reads 20.0NM.....				093deg	87.2NM	00+32
	Approach: To Fix 01. Turn left to 343deg and follow the OB (163deg) course from FFU. When established on course retune Nav1 to runway 34R ILS 109.50, and set the OBS to 340deg.....				343deg	25.1NM	00+10
	To runway. Turn left to runway Hdg 340deg for a visual or ILS approach.....				340deg	5.0NM	00+02
	Land – Salt Lake City Intl runway 34R Length – 12,011ft. Width – 150ft. Surface – Asphalt						
Flight No. 813-02-62	Arrival Airport Elev. – 4,225ft.				Estimated totals for this flight>>>		320.4NM 02+00

Wednesday 4th December

Today's leg takes us over Glenwood Springs, which is the last resting place of John Henry "Doc" Holliday, who was born in Griffin, Georgia on August 14 1851 and died in May 1887.

During his short lifetime, Doc Holliday, as he was called, graduated from the Pennsylvania College of Dental Surgery at Philadelphia, and practiced dentistry in several states. He also gambled, dealt Faro, and was involved in several disputes, some resulting in the death of another individual. His wanderings around the southwest took Doc to Texas, Wyoming, New Mexico, Kansas, and of course, Tombstone, Arizona. In the most infamous dispute of Doc Holliday's career, Doc, the Earps and the cattle rustling Clantons, "shot it out" at the OK Corral in Tombstone, on October 26, 1881. After several more years of wandering, fighting, and gambling, Doc Holliday, a tubercular, came to Glenwood Springs, hoping that the restorative waters would be beneficial to his health. After dealing Faro and trying to practice dentistry for a few short months, Doc Holiday succumbed to tuberculosis and died at the Hotel Glenwood.

From – To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 34R	Init. Hdg – 340deg.	Init. Alt – 13,500ft	Apt Elev. – 4,225ft.			
Salt Lake City (KSLC) United States To Eagle (KEGE) United States	Departure: To SLC. Tune Nav 1 to SLC VORTAC 116.80 and set the OBS to 340deg. After take off continue on runway heading towards the VOR and start your climb towards 13,500ft.....				340deg	4.5NM	00+02
	Enroute: To PVU. Make a standard rate right turn to 150deg, retune Nav 1 to PVU VOR/DME 108.40, set the OBS to 150deg and follow the OBS needle to PVU.....				150deg	40.8NM	00+16
	To PUC. Turn left to 115deg, retune Nav 1 to PUC VOR/DME 115.50, set the OBS to 115deg and follow the OBS needle to PUC.....				115deg	57.7NM	00+21
	To JNC. Turn left to 096deg, retune Nav 1 to JNC VORTAC 112.40, set the OBS to 096deg and follow the OBS needle to JNC.....				096deg	96.7NM	00+35
	To RIL. Turn left to 048deg, retune Nav 1 to RIL VOR/DME 110.60, set the OBS to 048deg and follow the OBS needle to RIL.....				048deg	57.3NM	00+21
	To SXW. Turn right to 067deg, retune Nav 1 to SXW VOR/DME 109.20, set the OBS to 067deg and follow the OBS needle to SXW. Start your descent to 9,000ft and slow to 120kts when the DME reads 18.0NM....				067deg	34.0NM	00+13
	Approach: To Fix 02. Turn right to runway reciprocal 070deg and fly heading for 5mins. Retune Nav1 to runway 25 ILS 110.10, and set the OBS to 250deg..... To runway. Commence a procedure turn. Make a right 45deg turn to 115deg and fly Hdg for 45 secs. Make a left 180deg turn to 295deg. When you can see the runway turn left to runway Hdg 250deg for a visual or ILS approach (localiser only)..... Land – Eagle Co Regl runway 25 Length – 7,987ft. Width – 150ft. Surface – Asphalt				070deg Final Hdg 250deg	10.0NM 10.5NM	00+05 00+05
Flight No. 813-02-63	Arrival Airport Elev. – 6,535ft.				Estimated totals for this flight>>>		311.5NM 01+58

Thursday 5th December

Today's leg passes over Fort Morgan, which is where Glenn Miller went to high school. He was born on 1st March 1904 in Clarinda, Iowa and was named Alton Glen Miller (later changed to Glenn). His parents moved to Fort Morgan in 1918. Glenn was a promising football player and in 1920 was named "Best Left End in Colorado" and given a football scholarship to the University of Northern Colorado, in Greeley, Colorado. However, he enjoyed music so much that he and some classmates decided to start their own band. By 1930, he was a much sought-after New York City free-lance musician. Later he became an organizer of other men's bands, particularly those of the Dorsey brothers (1934) and Ray Noble (1935). After an abortive attempt to form his own orchestra (1937), he tried again a year later and by 1939 had achieved world fame as a big-band leader. In 1942, he became part of the Army Specialists Corps with the rank of captain (later major) as leader of the U.S. Air Force band in Europe. On December 15, 1944, Glenn boarded a single engine C-64 Norseman aircraft to travel to Paris, France where he was to make arrangements for a Christmas broadcast. Tragically, the plane never reached France and his body was never found.

From – To	Flight Description. "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 25	Init. Hdg – 070deg.	Init. Alt – 15,500ft	Apt Elev. – 6,535ft.			
Eagle (KEGE) United States To McCook (KMCK) United States	Departure: To Fix 03. Tune the ADF to CQL 344.0 and Nav 1 to SXW VOR/DME 109.20, set the OBS to 053deg. After take off make a standard rate left turn to 070deg and start your climb towards 11,500ft. Waypoint reached when the RMI reads 216deg.....				070deg	7.4NM	00+03
	Enroute: To Fix 04. Turn left to 036deg and follow the OB (216deg) bearing from CQL through the valley. Waypoint reached when the OBS needle centres.....				036deg	9.6NM	00+04
	To FN. Turn right to 053deg, follow the OB (053deg) bearing from SXW, and tune the ADF to FN 400.0. You will pick up the NDB a few minutes after losing the SXW VOR.....				053deg	87.3NM	00+30
	To BAJ. Turn right to 072deg, follow the OB (252deg) bearing from FN and start your descent to 9,500ft. When you lose the signal from FN retune the ADF to BAJ 392.0 which you will pick up in a couple of minutes.....				072deg	80.1NM	00+29
	To HEQ. Turn right to 076deg, and follow the OB (256deg) bearing from BAJ. 3mins after station passage BAJ retune the ADF to HEQ 404.0 and head towards the NDB.....				076deg	43.3NM	00+16
	To IML. Turn right to 088deg. Tune the ADF to IML 283.0 and head towards the NDB. Tune Nav 1 to MCK VOR/DME 115.30 and set the OBS to 102deg.....				088deg	30.1NM	00+11
	To MCK. Turn right to 102deg and follow the OBS needle to MCK. Start your descent to 4,000ft and slow to 120kts when the DME reads 32.0NM.....				102deg	50.7NM	00+20
	Approach: To Fix 05. Turn right to runway reciprocal 122deg and fly heading for 2mins..... To runway. Commence a procedure turn. Make a right 45deg turn to 167deg and fly Hdg for 1min. Make a left 180deg turn to 347deg. When you can see the runway turn left to runway Hdg 302deg for a visual approach..... Land – McCook Mun runway 30 Length – 6,446ft. Width – 100ft. Surface – Concrete				122deg Final Hdg 302deg	4.0NM 9.0NM	00+02 00+05
Flight No. 813-02-64	Arrival Airport Elev. – 2,582ft.				Estimated totals for this flight>>>		321.5NM 02+00

Friday 6th December

Following a difficult journey through an intense snowstorm Phileas Fogg and his companions were attacked by Sioux Indians near Fort Kearney, and after a fierce fight, Passepartout and two other passengers were captured. Even though a single day's delay meant the almost certain loss of his wager, Phileas Fogg recruited 30 volunteers from the soldiers at Fort Kearney to go in search of, and subsequently rescue the missing passengers. On their return however, the train had gone and so they were left stranded with the next train not being due for another 24 hours. They were saved by the appearance of Mudge who owned a huge wind powered sledge by which means they were taken the 200 odd miles to Omaha where they caught a train to Chicago.

From – To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 30	Init. Hdg – 067deg.	Init. Alt – 9,500ft	Apt Elev. – 2,582ft.			
McCook (KMCK) United States To Omaha (KOFF) United States	Departure: To CSB. Tune the ADF to CSB 389.0. After take off make a standard rate right turn to 067deg and start your climb towards 9,500ft. You will pick up the NDB after a few minutes – head towards the NDB.....				067deg	22.9NM	00+11
	Enroute: To HDE. Turn right to 069deg, retune the ADF to HDE 396.0 and head towards the NDB.....				069deg	38.3NM	00+15
	To PSS. Turn left to 062deg, retune the ADF to PSS 338.0 and head towards the NDB.....				062deg	41.9NM	00+16
	To FMZ. Turn right to 090deg, retune the ADF to FMZ 392.0 and head towards the NDB.....				090deg	41.8NM	00+16
	To CEK. Turn left to 079deg, retune the ADF to CEK 420.0 and head towards the NDB.....				079deg	29.2NM	00+11
	To AFK. Turn right to 085deg, and follow the OB (265deg) bearing from CEK. 5mins after station passage CEK retune the ADF to AFK 347.0 and head towards the NDB.....				085deg	48.6NM	00+19
	To SDA. Turn left to 062deg, retune the ADF to SDA 411.0 and head towards the NDB. Start your descent to 5,000ft and tune Nav1 to runway 30 ILS 109.50, and set the OBS to 303deg				062deg	22.4NM	00+09
	Approach: To Fix 02. Turn left to 313deg and follow the OB (133deg) bearing from SDA..... To runway. Head towards the runway for a visual or ILS approach..... Land – Offutt AFB runway 30 Length – 11,708ft. Width – 300ft. Surface – Asphalt				313deg 303deg	17.4NM 13.4NM	00+07 00+06
Flight No. 813-02-65	Arrival Airport Elev. – 1,046ft.				Estimated totals for this flight>>>		275.9NM 01+50

Saturday 7th December

Today's leg takes us over the river Mississippi, which is the second largest watershed in the world, covering over 1.2 million square miles, (3,100,000 square km), or about one-eighth of the entire continent. The Mississippi River lies entirely in the United States. Rising in Lake Itasca in Minnesota, it flows almost due south across the continental interior, collecting the waters of its major tributaries, the Missouri (to the west) and the Ohio (to the east), approximately halfway along its journey to the Gulf of Mexico, a total distance of 2,350 miles (3,780 km) from its source. With its tributaries, the Mississippi drains all or part of 31 U.S. states and 2 Canadian provinces. The Mississippi itself is only about the 19th longest river in the world, but is the fourth longest if the length of the Missouri-Jefferson (Red Rock) system is added as well.

The Spanish explorer Hernando de Soto, commanded the first European expedition to penetrate to the river, and had been optimistic of plundering the southern tribes. In May 1541, his raiding force reached the river at a point south of what is now Memphis, Tennessee. However, the "Rio Grande," as the Spaniards called it, provided the newcomers with small profit and much grief. The river Indians launched repeated attacks; the Mississippi floods caught the Spanish unawares; and, de Soto was killed, after which the rest of his disappointed expedition retreated to the sea.

From – To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 30	Init. Hdg – 100deg.	Init. Alt – 9,500ft	Apt Elev. – 1,046ft.			
Omaha (KOFF) United States To Chicago – Du Page (KDPA) United States	Departure: To RDK. Tune the ADF to RDK 230.0. After take off make a standard rate right turn to 100deg and start your climb towards 9,500ft. Head towards the NDB.....				100deg	35.4NM	00+16
	Enroute: To CRZ. Turn left to 088deg, retune the ADF to CRZ 278.0 and head towards the NDB.....				088deg	22.5NM	++08
	To UNE. Turn right to 093deg, retune the ADF to UNE 379.0 and head towards the NDB.....				093deg	18.8NM	00+07
	To CNC. Turn left to 082deg, and follow the OB (262deg) bearing from UNE. 3mins after station passage UNE retune the ADF to CNC 335.0 and head towards the NDB.....				082deg	44.7NM	00+17
	To FFL. Turn right to 087deg, and follow the OB (267deg) bearing from CNC. 10mins after station passage CNC retune the ADF to FFL 332.0 and head towards the NDB.....				087deg	62.2NM	00+23
	To MPZ. Turn right to 098deg, retune the ADF to MPZ 212.0 and head towards the NDB.....				098deg	22.1NM	00+08
	To EZI. Turn left to 076deg and follow the OB (256deg) bearing from MPZ. When you lose the MPZ NDB, tune the ADF to EZI 245.0, which you will start to receive after a few minutes. Head towards EZI.....				076deg	71.8NM	00+27
	To OIX. Turn right to 078deg, and follow the OB (258deg) bearing from EZI. 5mins after station passage EZI retune the ADF to OIX 266.0 and head towards the NDB.....				078deg	50.7NM	00+19
	To Fix 03. Turn left to 046deg, retune the ADF to ME 350.0, head towards the NDB and start your descent to 2,900ft. Retune Nav1 to runway 1L ILS 111.70, and set the OBS to 015deg.....				046deg	35.1NM	00+14
	Approach: To runway. Turn left to 015deg for a visual or ILS approach..... Land – Du Page runway 1L Length – 7,573ft. Width – 100ft. Surface – Concrete				015deg	7.6NM	00+04
Flight No. 813-02-66	Arrival Airport Elev. – 757ft.					370.9NM	02+23

Sunday 8th December

Today's flight takes us along the southern edges of Lakes Michigan and Erie. The Great Lakes comprise the Lakes Superior, Michigan, Huron, Erie, and Ontario. Although Lake Baikal in Russia has a larger volume of water, the combined area of the Great Lakes, some 94,850 square miles (245,660 square kilometres), represents the largest surface of fresh water in the world, covering an area exceeding that of the United Kingdom. They drain an area of about 295,800 square miles, which includes the areas of the lakes themselves and their connecting waterways. Except for Lake Michigan, the lakes provide a natural border between Canada and the United States, a frontier that was stabilized by a boundary-waters treaty of 1909.

The lakes greatly modify the climate of the surrounding region. They absorb a large quantity of heat in the summer, which is then lost to the atmosphere during the winter, thus modifying the seasonal temperature range. Precipitation is substantially higher along the eastern shores of the lakes, creating a snowbelt that afflicts Erie, Pennsylvania, Buffalo, New York, and similarly situated cities. Severe storms can occur over the lakes, particularly in autumn and early winter. Winds can reach gale force and generate waves 10 feet or more in height. Large areas of the surface waters freeze during winter, although open patches usually remain in the centres of the lakes.

From – To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 1L	Init. Hdg – 153deg.	Init. Alt – 9,500ft	Apt Elev. – 757ft.			
Chicago – Du Page (KDPA) United States To Akron (KAKR) United States	Departure: To IA. Tune the ADF to IA 414.0. After take off turn right to 081deg and start your climb towards 9,500ft. Head towards the NDB.....				081deg	22.5NM	00+11
	Enroute: To GY. Turn right to 142deg, retune the ADF to GY 236.0 and head towards the NDB.....				142deg	32.2NM	00+13
	To MGC. Turn left to 072deg, retune the ADF to MGC 203.0 and head towards the NDB.....				072deg	24.3NM	00+09
	To SB. Turn right to 093deg, retune the ADF to SB 341.0 and head towards the NDB				093deg	26.8NM	00+10
	To ANQ. Turn right to 098deg, and follow the OB (278deg) bearing from SB. 5mins after station passage SB retune the ADF to ANQ 347.0 and head towards the NDB.....				098deg	50.9NM	00+19
	To USE. Turn to 097deg, and follow the OB (277deg) bearing from ANQ. 1min after station passage ANQ retune the ADF to USE 375.0 and head towards the NDB.....				097deg	42.8NM	00+16
	To PCW. Turn right to 101deg, and follow the OB (281deg) bearing from USE. 7mins after station passage USE retune the ADF to PCW 423.0 and head towards the NDB.....				101deg	57.0NM	00+21
	To BKL. Turn left to 095deg, and follow the OB (275deg) bearing from PCW. 6mins after station passage PCW retune the ADF to BKL 416.0. Head towards the NDB and start your descent to 5,500ft.....				095deg	54.1NM	00+21
	To AK. Turn right to 163deg, retune the ADF to AK 362.0 and head towards the NDB. Slow to 120kts and start your descent to 2,500ft. Tune Nav1 to runway 25 ILS 110.90, and set the OBS to 249deg. Note ILS has localiser and DME only.....				163deg	30.2NM	00+12
	Approach: To runway. Turn right to 249deg for a visual or ILS approach..... Land – Akron Fulton Intl runway 25 Length – 6,331ft. Width – 150ft. Surface – Asphalt				249deg	3.6NM	00+02
Flight No. 813-02-67	Arrival Airport Elev. – 1,066ft. Estimated totals for this flight>>>					344.4NM	02+14

Monday 9th December

Today's leg finishes in New York. The approach is very non-standard, but does give a great view of the city and its many famous buildings and bridges. During the approach, you will see the Empire State Building directly in front of you. Excavation was begun on the site of the old Waldorf-Astoria Hotel at 350 Fifth Avenue on January 22nd 1930, whilst the actual building construction started on March 17th. It was completed 1 year and 45 days later on May 1st 1931, when the building was officially opened by President Herbert Hoover. Designed by the architectural firm of Shreve, Lamb, & Harmon Associates, the Empire State Building, at 1,472 feet (448 meters) to the top of the antennae, was the tallest building in the world until the completion of the first tower of the World Trade Centre in Lower Manhattan in 1972 (Sears Tower in Chicago was completed in 1973). The building alone was expected to cost about \$50 million, but due to the Great Depression the final bill was just under half this (\$24,718,000).

From – To	Flight Description. "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 25	Init. Hdg – 081deg.	Init. Alt – 9,500ft	Apt Elev. – 1,066ft.			
Akron (KAKR) United States To New York (KLGA) United States	Departure: To TSO. Tune the ADF to TSO 395.0. After take off turn left to 153deg and start your climb towards 9,500ft. You will pick up the NDB after a few minutes – head towards the NDB.....				153deg	35.4NM	00+17
	Enroute: To MKP. Turn left to 109deg, retune the ADF to MKP 287.0 and head towards the NDB.....				109deg	60.5NM	00+23
	To BHU. Turn left to 095deg, retune the ADF to BHU 382.0 and head towards the NDB.....				095deg	23.3NM	00+09
	To RV. Turn left to 088deg and follow the OB (268deg) bearing from BHU. 15mins after station passage BHU retune the ADF to RV 407.0 and head towards the NDB.....				088deg	72.3NM	00+27
	To BZJ. Turn right to 111deg and follow the OB (291deg) bearing from RV. 7mins after station passage RV retune the ADF to BZJ 328.0 and head towards the NDB.....				111deg	54.2NM	00+20
	To AB. Turn left to 090deg and follow the OB (270deg) bearing from BZJ. 5mins after station passage BZJ retune the ADF to AB 400.0 and head towards the NDB.....				090deg	46.7NM	00+17
	To EW. Turn right to 102deg and follow the OB (282deg) bearing from AB. 8mins after station passage AB retune the ADF to EW 241.0, head towards the NDB and start your descent to 6,000ft. Tune Nav 1 to runway 4 ILS 110.50, and set the OBS to 045deg. Tune Nav 2 to TEB VOR/DME 108.40 and set the OBS to 347deg.....				102deg	60.1NM	00+23
	To OGY. Turn right to 108deg and retune the ADF to OGY 414.0. Head towards the NDB and start your descent to 2,000ft. Do not turn towards the runway when you cross the localiser beam.....				108deg	15.9NM	00+08
	Approach: To Fix 02. Make a sharp left turn to 347deg and follow the Nav 2 OBS needle. Waypoint reached when the Nav 2 DME reads 11.1NM.....				347deg	7.6NM	00+04
	To runway. Turn right to 045deg for a visual or ILS approach..... Land – La Guardia runway 4 Length – 6,999ft. Width – 150ft. Surface – Asphalt				045deg	6.2NM	00+03
Flight No. 813-02-68	Arrival Airport Elev. – 22ft. Estimated totals for this flight>>>					382.2NM	02+31

Tuesday 10th December

Phileas Fogg arrived in New York on 11th December at a quarter past eleven in the evening having travelled by special train from Chicago, only to find that the Cunard steamer had left for Liverpool forty-five minutes earlier. The next fast steamer did not leave until the 14th, by which time he would have lost his wager. The next day Phileas Fogg managed to find a small, fast cargo boat that was about to leave for Bordeaux. Phileas Fogg manages to buy four berths on the steamer at a cost of \$2,000 each, but the captain only agreed to take them to Bordeaux. However, once they are at sea Phileas Fogg bribed the crew who locked the captain in his cabin and agreed to take Phileas Fogg to Liverpool.

From – To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 4	Init. Hdg – 045deg.	Init. Alt – 9,500ft	Apt Elev. – 22ft.			
New York (KLGA) United States To Brunswick (KNHZ) United States	Departure: To UR. Tune the ADF to UR 385.0. After take off continue on runway heading 045deg, start your climb towards 9,500ft and head towards the NDB.....				045deg	6.9NM	00+04
	Enroute: To OX. Turn right to 059deg and follow the OB (239deg) bearing from UR. 3mins after station passage UR retune the ADF to OX 362.0 and head towards the NDB.....				059deg	44.0NM	00+20
	To BD. Turn left to 042deg, retune the ADF to BD 388.0 and head towards the NDB.....				042deg	33.5NM	00+12
	To RS. Turn right to 069deg and follow the OB (249deg) bearing from BD. 2mins after station passage BD retune the ADF to RS 279.0 and head towards the NDB.....				069deg	40.9NM	00+15
	To DRY. Turn left to 053deg and follow the OB (233deg) bearing from RS. 3mins after station passage RS retune the ADF to DRY 338.0 and head towards the NDB. Tune Nav 1 to runway 1R ILS 109.35, and set the OBS to 012deg. Tune Nav 2 to ENE VORTAC 117.10 and set the OBS to 062deg.....				053deg	45.1NM	00+17
	To ENE. Turn right to 062deg and follow the Nav 2 OBS needle to ENE. Start your descent to 3,000ft when the Nav 2 DME reads 5.0NM.....				062deg	47.8NM	00+18
	Approach: To Fix 01. Turn right to 077deg, reset the Nav 2 OBS needle to 077deg and follow the OBS needle. Waypoint reached when the DME reads 35.1NM.....				077deg	35.1NM	00+14
	To runway. Turn left to 012deg for a visual or ILS approach..... Land – Brunswick NAS runway 1R Length – 8,000ft. Width – 200ft. Surface – Asphalt				012deg	10.0NM	00+05
Flight No. 813-02-69	Arrival Airport Elev. – 75ft.					263.3NM	01+45
	Estimated totals for this flight>>>						

Wednesday 11th December

Today's flight takes us to Greenwood, Nova Scotia, which was settled by Loyalists in the 1770's in the aftermath of the American Revolution, when approximately 60,000 Loyalists migrated to Canada in support of the Crown. Present day Greenwood was originally two communities, Greenwood Square, so named because of the majestic pine trees, and the popularity of the name among Loyalists, and the original Kingston Village (not to be confused with Kingston Station which was two kilometres north). This community, built between the Fales and Annapolis Rivers, was the commercial hub of the area serving rural farmers from Tremont, Harmony, North Kingston and Melvern Square, with furniture stores, blacksmith and cooperage shops as well as sawmills, a post office and several other shops.

In 1940, Greenwood was selected as the site to build the Royal Air Force training base because of the topography of the land, and the fog free climate. A total of fifteen parcels of land totalling some 672.67 acres was purchased from local landowners. Later more land was purchased as the base expanded to accommodate the housing requirements of the personnel. Construction began in the autumn of 1941 for building RAF Station Greenwood to train aviators for the Second World War. The RAF Station became the RCAF Station in 1944, and in 1968 the station became Canadian Forces Base Greenwood.

From – To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 1R	Init. Hdg – 090deg.	Init. Alt – 9,500ft	Apt Elev. – 75ft.			
Brunswick (KNHZ) United States To Greenwood (CYZX) Canada	Departure: To ISS. Tune the ADF to ISS 407.0. After take off turn right to 090deg, start your climb towards 9,500ft and head towards the NDB.....				090deg	15.7NM	00+08
	Enroute: To BST. Turn left to 064deg, retune the ADF to BST 278.0 and head towards the NDB.....				064deg	37.3NM	00+16
	To BH. Turn right to 094deg, retune the ADF to BH 330.0 and head towards the NDB.....				094deg	31.1NM	00+12
	To MVM. Continue on 094deg, retune the ADF to MVM 251.0 and head towards the NDB.....				094deg	36.8NM	00+14
	To 6E. Turn right to 108deg, retune the ADF to 6E 387.0 and head towards the NDB.....				108deg	28.8NM	00+11
	To YZX. Turn left to 100deg, retune the ADF to YZX 266.0 and head towards the NDB. Tune Nav 1 to runway 26 ILS 110.70, and set the OBS to 265deg. Tune Nav 2 to UZX DME 117.60. Start your descent to 1,900ft when Nav 2 DME reads 40.0 NM.....				100deg	73.4NM	00+29
Flight No. 813-02-70	Approach: To GF. Turn left to 084deg, retune the ADF to GF 341.0, head towards the NDB and slow to 120kts..... To runway. Commence a procedure turn. Make a right 45deg turn to 130deg and fly Hdg for 1min. Make a left 180deg turn to 310deg. When you can see the runway turn left to runway Hdg 265deg for a visual or ILS approach..... Land – Greenwood runway 26 Length – 8,023ft. Width – 200ft. Surface – Asphalt				084deg Final Hdg 265deg	13.8NM 9.8NM	00+06 00+05
	Arrival Airport Elev. – 91ft.				Estimated totals for this flight>>>		246.7NM 01+41

Today's leg takes us to Sydney Mines on Cape Breton. Founded in 1785 by Col. J.F.W. DesBarres, Sydney was first settled by Loyalists from New York State, who were followed 20 years later by immigrants from the Scottish Highlands.

At one time, Sydney Mines was called "Lazytown." A map of 1863 actually showed the area as "Lazytown". This less than flattering name came from local farmers who would arrive in town in the morning to find only a few people up and about. This was due to the shift work employed by the local mines. The coal miners and their wives would wake at dawn and get ready for the day shift. After the men went off to the pits, the wives would return to bed for some extra sleep. No one was awake to greet the farmers coming to sell their milk, eggs and produce.

Sydney Mines grew up around the rich coalfields of Sydney Harbour; the first mining took place in 1766 along the exposed seams of the harbour cliffs. One pit - Princess Colliery - operated continuously for 100 years, from 1875 to 1975. In that time, Princess produced 30 million tonnes of coal.

From – To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 26	Init. Hdg – 094deg.	Init. Alt – 9,500ft	Apt Elev. – 91ft.			
Greenwood (CYZX) Canada To Sydney (CYQY) Canada	Departure: To GF. Tune the ADF to GF 341.0. After take off make a standard rate right turn to 094deg, start your climb towards 9,500ft and head towards the NDB.....				094deg	9.2NM	00+05
	Enroute: To 8F. Turn left to 088deg, retune the ADF to 8F 239.0 and head towards the NDB.....				088deg	61.8NM	00+26
	To 5Y. Turn right to 094deg, retune the ADF to 5Y 338.0 and head towards the NDB.....				094deg	36.9NM	00+14
	To PD. Turn right to 109deg and follow the OB (289deg) bearing from 5Y. 8mins after station passage 5Y retune the ADF to PD 229.0 and head towards the NDB.....				109deg	56.9NM	00+21
	To Fix 03. Turn left to 088deg, follow the OB (268deg) bearing from PD, and start your descent to 6,000ft. Tune Nav 1 to runway 7 ILS 110.30, and set the OBS to 068deg				088deg	41.0NM	00+16
	Approach: To runway. Turn left to 068deg for a visual or ILS approach..... Land – Sydney runway 7 Length – 7,064ft. Width – 200ft. Surface – Asphalt				068deg	18.5NM	00+08
Flight No. 813-02-71	Arrival Airport Elev. – 203ft. Estimated totals for this flight>>>					224.3NM	01+30

Friday 13th December

Today's leg takes us to St Johns, which was the landing point for the first transatlantic cable. The idea of a transatlantic cable was first proposed in 1845, and the manufacture of the cable started in early 1857 and was completed in June. Before the end of July, it was stowed on the American *Niagara* and the British *Agamemnon* – both naval vessels lent by their respective governments for the task. They started at Valentia Harbour in Ireland (which was by then connected to the rest of the British Isles) on 5 August. For the first few days, everything went well but six days later, the cable snapped after just 380 miles had been laid. The second attempt began on 25 June 1858. This time the same two ships met each other in mid-Atlantic where they joined their respective ends. The cable broke almost immediately. Again, the two ships made another splice: this time they managed 40 miles before it broke again. The fourth time they had laid 146 miles before the cable was lost yet again. On 29 July, they made their fifth attempt, again starting from the mid point. This time it worked, and on 5 August 1858 both ships reached their destinations – Valentia Harbour in Ireland and Trinity Bay in Newfoundland. Unfortunately, the engineer in charge, Wildman Whitehouse, started by applying very high voltages rather than the very weak currents that had been tested during the cable laying. Within three weeks the damage inflicted on the cable by the high voltages was becoming apparent and it ceased to work. The next attempt was made in July 1865, when the *Great Eastern* succeeded in laying 1,200 miles before the cable snapped. Several attempts were made to retrieve the broken end but they all failed.

The final attempt was made with virtually no problems at all. On 27 July 1866, the cable was landed in Newfoundland after the *Great Eastern* had averaged 120 miles a day while paying out the cable. Almost immediately the *Great Eastern* steamed east to the point that the second cable had reached and after about two weeks of trying, they found and raised the broken end. This was no mean feat as the broken cable was at a depth of 16,000 feet. The broken end was spliced and on 8 September the second completed cable was landed. The original two cables ceased to work in 1872 and 1877, however, by that time four other cables were in operation.

From – To	Flight Description. "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 7	Init. Hdg – 068deg.	Init. Alt – 9,500ft	Apt Elev. – 203ft.			
Sydney (CYQY) Canada To St John's (CYYT) Canada	Departure: To QY. Tune the ADF to QY 263.0. After take off continue on runway heading 068deg, start your climb towards 9,500ft and head towards the NDB.....				068deg	4.9NM	00+03
	Enroute: To MQ. Turn right to 093deg and follow the OB (273deg) bearing from QY. When you lose the QY NDB, tune the ADF to MQ 402.0. You will pick up the NDB after about 16 minutes – head towards the NDB.....				093deg	157.0NM	01+02
	To 7H. Turn right to 110deg and follow the OB (290deg) bearing from MQ. 2mins after station passage MQ retune the ADF to 7H 234.0 and head towards the NDB.....				110deg	43.5NM	00+16
	To UWP. Turn left to 103deg, retune the ADF to UWP 323.0 and head towards the NDB.....				103deg	55.1NM	00+21
	To Fix 01. Turn left to 089deg, retune the ADF to YT 260.0, head towards the NDB and start your descent to 3,000ft. Tune Nav 1 to runway 11 ILS 109.10, and set the OBS to 110deg				089deg	45.3NM	00+18
	Approach: To runway. Turn right to 110deg for a visual or ILS approach..... Land – St John's Intl runway 11 Length – 8,490ft. Width – 200ft. Surface – Asphalt				110deg	8.5NM	00+04
Flight No. 813-02-72	Arrival Airport Elev. – 462ft. Estimated totals for this flight>>>					314.3NM	02+04

Saturday 14th December

Today's leg is all about Great Circle navigation, and again I recommend Peter Tucker's marvellous "Long-Range Navigation with Limited Facilities" notes.

If you follow the route notes below you should find the NDB coming up straight in front of you – and you will feel really pleased with yourself when the needle swings to the expected bearing! However, if you do get to the point when you have flown for more than 8 hours and haven't found the NDB, which has a range of 75NM, then I suggest you try tuning Nav 1 to FRS VOR/DME 113.30, which has a range of 195NM.

The suggested engine settings for the cruise are taken from the Operating instructions for the Pratt and Whitney engines (dc3engine.pdf) found on the <http://members.tripod.com/pcmuseum/dc3/> site. With these settings each engine should produce a power of 525 BHP, with a fuel consumption of only 39 gph per engine. Set the take off time to 09:00 to make sure that you arrive in the Azores in Daylight.

From – To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 11	Init. Hdg – 133deg.	Init. Alt – 9,500ft	Apt Elev. – 462ft.			
St John's (CYYT) Canada To Flores (LPFL) Portugal (Azores)	Departure: To Fix 02. After take off turn right to 133deg and start your climb towards 9,500ft. When you reach cruising altitude throttle back to an economic cruising speed of 25" MP and 2,050 RPM. Tune the ADF to FLO 270.0. Waypoint reached after 1 hour.....				133deg	-----	01+00
	Enroute: To Fix 03. Turn right to 135deg. Waypoint reached after 1 hour.....				135deg	-----	01+00
	To Fix 04. Turn right to 136deg. Waypoint reached after 1 hour.....				136deg	-----	01+00
	To Fix 05. Turn right to 138deg. Waypoint reached after 1 hour.....				138deg	-----	01+00
	To Fix 06. Turn right to 140deg. Waypoint reached after 1 hour.....				140deg	-----	01+00
	To Fix 07. Turn right to 141deg. Waypoint reached after 1 hour.....				141deg	-----	01+00
	To Fix 08. Turn right to 142deg. Waypoint reached after 1 hour.....				142deg	-----	01+00
	To FLO. Turn right to 143deg, and when you start to pick up the NDB head towards it. 30mins after picking up the NDB start your descent to 3,500ft. Slow to 120kts when you are near the island.....				143deg	-----	01+09
	Approach: To Fix 09. Turn right to 180deg, follow the OB (000deg) bearing from FLO and descend to 2,500ft. When established on course, retune the ADF to SC 331.0. Waypoint reached after 4 mins when the RMI reads 013deg..... To runway. Make a standard rate left turn to 003deg for a visual approach..... Land – Flores runway 36 Length – 4,579ft. Width – 98ft. Surface – Concrete				180deg 003deg	8.0NM 9.1NM	00+04 00+05
Flight No. 813-02-73	Arrival Airport Elev. – 111ft.					1,072.6NM	08+18

Sunday 15th December

The route we are taking across the Atlantic is the same as that taken by the NC-4 Flying Boat which was the first aircraft to cross the Atlantic. The crossing was planned with precision by the US Navy who stationed twenty-one ships at 50-mile intervals along the flight path from Newfoundland to the Azores. The ships were to fire signal shells and point searchlights up into the air to help guide the planes on their way, and act as a rescue service for any aircraft that was forced down. A picket line of 14 ships was assigned from the Azores to Lisbon, whilst 10 ships were in position between Lisbon and Plymouth. The three Curtis aircraft left Newfoundland on May 16th 1919, but NC-1 and NC-3 were forced to land at sea due to dense fog and heavy rain. The crews were rescued successfully, however both aircraft were damaged beyond repair. NC-4 managed to get to the Azores where they waited for the weather to clear. NC-4 reached Lisbon, Portugal, on May 27th completing the first crossing of the Atlantic Ocean by an airplane in a flight time of 27 hours. NC-4 departed Lisbon on the morning of May 29 and after further engine problems landed at Plymouth Harbour early in the afternoon of May 31st, escorted by three flying boats of the Royal Air Force. She received a tumultuous reception from an English crowd.

This feat was accomplished a scant 19 days before the two British flyers, John Alcock and Albert Brown, made the first non-stop transatlantic air flight, crossing from Newfoundland to Ireland in 16½ hours on June 15th 1919.

From – To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 36	Init. Hdg – 147deg.	Init. Alt – 9,500ft	Apt Elev. – 111ft.			
Flores (LPFL) Portugal (Azores) To Ponta Delgada (LPPD) Portugal (Azores)	Departure: To Fix 03. Tune the ADF to FLO 270.0. After take off make a standard rate right turn to 147deg and start your climb towards 9,500ft. Waypoint reached when the RMI reads 309deg.....				147deg	10.7NM	00+06
	Enroute: To FIL. Turn left to 129deg and follow the OB (309deg) bearing from FLO. 26mins after station passage Fix 03 retune the ADF to FIL 380.0 and head towards the NDB.....				129deg	118.6NM	00+47
	To Fix 04. Turn left to 120deg and follow the OB (300deg) bearing from FIL. 20mins after station passage FIL retune the ADF to MGL 371.0 and head towards the NDB. When you can see the island coming over the horizon start your descent to 2,000ft. Tune Nav 1 to runway 30 ILS 109.50, and set the OBS to 305deg. Waypoint reached when you start to receive the ILS signal.....				120deg	121.1NM	00+45
	To PD. Turn right to 123deg, retune the ADF to PD 351.0, head towards the NDB and slow to 120kts.....				123deg	28.6NM	00+13
	Approach: To Fix 05. Turn right to runway reciprocal 125deg and fly heading for 2mins..... To runway. Commence a procedure turn. Make a right 45deg turn to 170deg and fly Hdg for 1min. Make a left 180deg turn to 350deg. When you can see the runway turn left to runway Hdg 305deg for a visual or ILS approach..... Land – Joao Paulo li runway 30 Length – 7,726ft. Width – 148ft. Surface – Asphalt				125deg Final Hdg 305deg	4.0NM 10.1NM	00+02 00+05
Flight No. 813-02-74	Arrival Airport Elev. – 259ft.				Estimated totals for this flight>>>		293.1NM 01+58

Monday 16th December

The Azores was reputedly discovered about 1427 by Diogo de Senill (or Sevilha), a captain in the employment of the King of Portugal. No traces of previous human habitation or visitation were found on any of them. Settlement began on Santa Maria about 1432 under Gonçalo Velho Cabral, a Portuguese official. São Miguel was settled in 1444 and Terceira some years later. By the end of the 15th century, all the islands were inhabited, and trade with Portugal became well established. From 1580 until 1640, the Azores like the rest of Portugal, were subject to Spanish rule. The islands were the rendezvous for the Spanish treasure fleets on their voyages home from the West Indies; hence, they became the location for the maritime warfare between England under Elizabeth I and Spain and Portugal, the peninsular powers.

The islands were an important refuelling point for the Boeing 314 Clipper service between Port Washington and Marseilles, via the Azores and Lisbon, when on May 20th 1939, Pan American inaugurated the first transatlantic mail service. The Yankee Clipper under the command of Captain A. E. LaPorte carried almost a ton of mail from Port Washington to Marseilles in 29 hours. The same aircraft, commanded by Captain Harold Gray, opened the northern mail service to Southampton on June 24th 1939. Passenger travel began on the Dixie Clipper on June 24th 1939. Passengers were charged \$375 for a one-way ticket and \$675 for a round trip fare.

From – To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 30	Init. Hdg – 099deg.	Init. Alt – 9,500ft	Apt Elev. – 259ft.			
Ponta Delgada (LPPD) Portugal (Azores) To Lisbon (LPPT) Portugal	Departure: To MGL. Tune the ADF to MGL 371.0. After take off make a standard rate left turn to 099deg, start your climb towards 9,500ft and head towards the NDB.....				099deg	11.1NM	00+06
	Enroute: To Fix 03. Turn left to 094deg. When you reach cruising altitude throttle back to an economic cruising speed of 25" MP and 2,050 RPM. Retune the ADF to CP 389.0. Waypoint reached 1 hour after take off.....				094deg	-----	00+54
	To Fix 04. Turn right to 095deg. Waypoint reached after 1 hour.....				095deg	-----	01+00
	To Fix 05. Turn right to 096deg. Waypoint reached after 1 hour.....				096deg	-----	01+00
	To Fix 06. Turn right to 097deg. Waypoint reached after 1 hour.....				097deg	-----	01+00
	To Fix 07. Turn right to 098deg. Waypoint reached after 1 hour.....				098deg	-----	01+00
	To CP. Continue on 098deg, and when you start to pick up the NDB head towards it. 20mins after picking up the NDB start your descent to 2,700ft. Tune Nav 1 to runway 3 ILS 109.10, and set the OBS to 029deg.				098deg	-----	01+04
Flight No. 813-02-75	Approach: To runway. Turn left to 029deg for a visual or ILS approach..... Land – Lisbon runway 3 Length – 12,493ft. Width – 148ft. Surface – Asphalt				029deg	8.6NM	00+05
	Arrival Airport Elev. – 374ft.				Estimated totals for this flight>>>		792.3NM 06+09

Tuesday 17th December

Lisbon owes its historical prominence to its superb natural harbour, which is one of the most beautiful in the world. The city lies on the north bank of the Tagus River (Rio Tejo), and is spanned, on the west side of the city, by the 25th of April Bridge (formerly called the Salazar Bridge), which we crossed during the approach yesterday. This is the longest suspension bridge in Western Europe and has been the main roadway into the city since it was built in the mid-1960s. The first bridge in Lisbon's long history to span the Tagus, it is more than 7,470 feet (2,277 metres) from anchorage to anchorage, with a central span of about 3,323 feet, suspended 230 feet above mean water level. There is space under the roadway to carry two railroad tracks

Once a remote outpost on what was thought to be the farthest edge of the known world, by the 15th century Lisbon was established as the centre of operations for Portuguese exploration. During this period, a census of Lisbon showed 65,000 inhabitants occupying 23 parishes. A considerable number of these residents became rich, and the city was endowed with larger and more luxurious buildings. African slaves became a familiar Lisbon sight, the trade in slaves being one in which Portugal played a major role. After the great explorer Vasco da Gama led a Portuguese fleet to India in 1498, the Venetian monopoly on Oriental trade was broken; and colonies of German, Flemish, Dutch, English, and French traders established themselves in Lisbon. Greeks, Lombards, and Genoese who had lost their trading enclaves in Constantinople when that city fell to the Turks in 1453 also came to Lisbon. During this time, half the nation's population left in pursuit of wealth in the new colonies. With farms deserted, food was imported from other European countries at crippling prices, and with so many skilled men absent, wages rose sharply, as did the cost of building and manufacturing materials.

From – To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 3	Init. Hdg – 025deg.	Init. Alt – 9,500ft	Apt Elev. – 374ft.			
Lisbon (LPPT) Portugal To Valladolid (LEVD) Spain	Departure: To LAR. Tune the ADF to LAR 382.0. After take off turn to 025deg, start your climb towards 9,500ft and head towards the NDB.....				025deg	14.5NM	00+08
	Enroute: To TO. Turn right to 056deg, retune the ADF to TO 423.0 and head towards the NDB.....				056deg	46.2NM	00+19
	To COV. Turn left to 045deg and follow the OB (225deg) bearing from TO. 15mins after station passage TO retune the ADF to COV 360.0 and head towards the NDB.....				045deg	62.4NM	00+23
	To VGD. Turn right to 052deg, retune the ADF to VGD 365.0 and head towards the NDB.....				052deg	61.4NM	00+23
	To ZMR. Turn right to 054deg, retune the ADF to ZMR 300.0 and head towards the NDB.....				054deg	47.7NM	00+18
	To VLD. Turn right to 074deg, retune the ADF to VLD 342.0 and head towards the NDB. Tune Nav 1 to runway 23 ILS 109.30, and set the OBS to 230deg. Start your descent to 5,000ft and slow to 120kts 5mins after station passage ZMR.....				074deg	43.8NM	00+17
	Approach: To runway. Commence a procedure turn. Make a right turn to 095deg and fly Hdg for 1min. Make a left 180deg turn to 275deg. When you can see the runway turn left to runway Hdg 230deg for a visual or ILS approach..... Land – Villanubla runway 23 Length – 9,850ft. Width – 197ft. Surface – Asphalt				Final Hdg 230deg	11.7NM	00+06
Flight No. 813-02-76	Arrival Airport Elev. – 2,775ft.					287.7NM	01+54

Wednesday 18th December

On 18th December when they were 770 miles from Liverpool, Phileas Fogg's ship the "*Henrietta*" ran out of coal. Phileas Fogg decided that he must burn the upper works of the ship to provide sufficient fuel for the engines. He therefore negotiated with the captain to buy the ship, which he did for \$60,000 (about £20,000 in those days). Over the next few days, the wooden parts of the ship were consumed to keep the engines supplied with steam.

Meanwhile our flight takes us to Saint-Nazaire, which is thought to be the site of the ancient Gallo-Roman seaport of Corbilo. It was little more than a fishing village until the mid-19th century, when the port was built to accommodate vessels too large to sail up the Loire to Nantes. Saint-Nazaire's shipbuilding yards became among the largest in Europe, constructing warships, tankers, and the ocean liners *Normandie* and *France*. During World War II, the town was occupied by the Germans, who used the port as a major Atlantic submarine base. In 1942, the docks were blown up by the British and were not restored to service until 1946.

From – To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 23	Init. Hdg – 042deg.	Init. Alt – 9,500ft	Apt Elev. – 2,775ft.			
Valladolid (LEVD) Spain To St Nazaire (LFRZ) France	Departure: To VLD. Tune the ADF to VLD 342.0. After take off make a standard rate left turn to 042deg, start your climb towards 9,500ft and head towards the NDB.....				042deg	12.9NM	00+06
	Enroute: To BGS. Turn right to 060deg, retune the ADF to BGS 357.0 and head towards the NDB.....				060deg	59.9NM	00+24
	To HIG. Turn left to 056deg and follow the OB (236deg) bearing from BGS. 10mins after station passage BGS retune the ADF to HIG 328.0 and head towards the NDB.....				056deg	101.7NM	00+38
	To CAA. Turn left to 027deg, retune the ADF to CAA 382.0 and head towards the NDB.....				027deg	75.8NM	00+28
	To ROC. Turn left to 008deg and follow the OB (188deg) bearing from CAA. 22mins after station passage CAA retune the ADF to ROC 396.0 and head towards the NDB.....				008deg	80.4NM	00+31
	To RL. Turn left to 349deg, retune the ADF to RL 322.0, start your descent to 8,500ft and head towards the NDB.....				349deg	17.9NM	00+07
	To GL. Turn left to 340deg, retune the ADF to GL 369.0, start your descent to 4,500ft and head towards the NDB.....				340deg	57.9NM	00+23
	To MT. Turn left to 324deg, retune the ADF to MT 398.0, head towards the NDB and start your descent to 1,200ft. Tune Nav 1 to runway 26 ILS 108.50, and set the OBS to 258deg				324deg	22.3NM	00+09
	Approach: To runway. Turn left to 258deg for a visual or ILS approach..... Land – Montoir runway 26 Length – 7,878ft. Width – 148ft. Surface – Concrete				258deg	3.8NM	00+02
Flight No. 813-02-77	Arrival Airport Elev. – 13ft.					432.6NM	02+48

Today's flight takes us over the Scilly Islands, whose rocks caused the wreck of many ships over the years including the loss of Sir Cloudesley Shovel's squadron of the British Fleet in 1703 in which 2,000 men died. This incident led, in 1714, to the British Government offering £20,000 for a solution which could provide longitude to within half-a-degree. A body known as the Board of Longitude was set up to administer and judge the longitude prize. They received more than a few weird and wonderful suggestions – like squaring the circle or inventing a perpetual motion machine, and the phrase 'finding the longitude' became a sort of catchphrase for the pursuits of fools and lunatics. Many people believed that the problem simply could not be solved.

John Harrison, a working class joiner from Lincolnshire took up the challenge and after 30 years of building various clocks, Harrison's son William set sail for the West Indies, with a Harrison clock, aboard the ship *Deptford* on 18 November 1761. They arrived in Jamaica on 19 January 1762, where the watch was found to be only 5 seconds slow! It was a remarkable achievement but it would be some time before the Board of Longitude was sufficiently satisfied to award Harrison the prize. A long battle then took place between Harrison and the Board of Longitude, and in 1771, King George III was approached and, after a trial of the clock, agreed that Harrison had rightfully won the prize. Harrison and his son were finally awarded £8,750 by an Act of Parliament in June 1773, and, perhaps more importantly, John Harrison was finally recognised as having solved the longitude problem.

From – To	Flight Description. "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM	
	Dep. Rwy – 26	Init. Hdg – 304deg.	Init. Alt – 8,500ft	Apt Elev. – 13ft.				
St Nazaire (LFRZ) France To Cork (EICK) Ireland	Departure: To LOR. Tune the ADF to LOR 359.0. After take off make a right turn to 304deg, start your climb towards 8,500ft and head towards the NDB.....				304deg	59.9NM	00+27	
	Enroute: To BST. Turn right to 314deg, retune the ADF to BST 428.0 and head towards the NDB.....				314deg	50.6NM	00+19	
	To STM. Turn left to 331deg and follow the OB (151deg) bearing from BST. When you lose the BST signal retune the ADF to STM 321.0, which you will pick up after about 4 minutes. Head towards the NDB..				331deg	122.1NM	00+46	
	To Fix 02. Turn left to 328deg and follow the OB (148deg) bearing from STM. 25mins after station passage RR retune the ADF to OH 288.0, head towards the NDB and start your descent to 6,500ft. Tune Nav 1 to runway 35 ILS 109.90, and set the OBS to 348deg. Tune Nav 2 to CRK VOR/DME 114.60 and set the OBS to 348deg. Waypoint reached when the Nav 2 OBS needle centres.....				328deg	114.6NM	00+44	
	Approach: To runway. Turn right to 348deg for a visual or ILS approach..... Land – Cork runway 35 Length – 6,989ft. Width – 148ft. Surface – Asphalt				348deg	28.8NM	00+12	
Flight No. 813-02-78	Arrival Airport Elev. – 501ft.				Estimated totals for this flight>>>		376.0NM	02+28

On 20th of December Phileas Fogg had burned just about all of the “*Henrietta*” and realised that there would not be sufficient fuel to reach Liverpool. However, they were abreast of Queenstown (Cork) at the time and remembered that transatlantic streamers called in there to drop the mail, which was then taken by rail to Dublin and on to the United Kingdom. So, after waiting for the tide they arrived at Queenstown at 1 o'clock in the morning and quickly found a train to Dublin where they embarked on a fast steamer to Liverpool. Phileas Fogg stepped foot on English soil at 20 minutes to 12 on 21st December, and thus had more than enough time to get to London by eight forty five. However, he was promptly arrested by Detective Fix for the robbery of the Bank of England.

From – To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 35	Init. Hdg – 349deg.	Init. Alt – 9,500ft	Apt Elev. – 501ft.			
Cork (EICK) Ireland To Liverpool (EGGP) United Kingdom	Departure: To OC. Tune the ADF to OC 343.0. After take off continue on runway heading 349deg, start your climb towards 9,500ft and head towards the NDB.....				349deg	4.7NM	00+02
	Enroute: To CML. Turn right to 057deg, retune the ADF to CML 387.0 and head towards the NDB.....				057deg	50.7NM	00+23
	To KLY. Turn left to 053deg, retune the ADF to KLY 378.0 and head towards the NDB.....				053deg	69.8NM	00+26
	To PS. Turn right to 088deg, retune the ADF to PS 304.0 and head towards the NDB.....				088deg	65.7NM	00+24
	To HAW. Turn right to 113deg, retune the ADF to HAW 340.0 and head towards the NDB.....				113deg	49.0NM	00+18
	To WHI. Turn left to 095deg retune the ADF to WHI 368.5, head towards the NDB and start your descent to 5,300ft. Tune Nav 1 to runway 27 ILS 111.75, and set the OBS to 272deg				095deg	12.8NM	00+05
	Approach: To Fix 01. Continue on 095deg and follow the OB (275deg) bearing from WHI. When established on course, retune the ADF to BAE 325.0. Waypoint reached when the RMI reads 358deg.....				095deg	10.5NM	00+04
	To Fix 02. Turn left to 358deg and head towards the NDB. Waypoint reached when the ILS needle centres To runway. Turn left to 272deg for a visual or ILS approach..... Land – Liverpool runway 27 Length – 7,489ft. Width – 151ft. Surface – Asphalt				358deg 272deg	10.1NM 16.7NM	00+04 00+08
Flight No. 813-02-79	Arrival Airport Elev. – 82ft. Estimated totals for this flight>>>					290.0NM	01+54

Saturday 21st December

Phileas Fogg languished in gaol watching the time tick by, until at thirty-three minutes past two Detective Fix returned and said that he was very sorry, but the real thief had been arrested some days ago. Phileas Fogg and Passepartout quickly made their way to Liverpool station and ordered a special train, which proceeded as fast as possible towards London. However, due to some delays they didn't arrive in London until ten to nine, which meant that Phileas Fogg had lost his bet by 5 minutes! The next day (Sunday) Phileas Fogg asked Aouda to marry him, to which she agreed. Passepartout went to the clergyman to arrange the marriage and discovered that the day was Saturday and not Sunday as they had thought. By this time it was eight thirty five in the evening, so Phileas Fogg had just ten minutes to reach the Reform club, where having hailed a taxi, he arrived at precisely eight forty five, and consequently won his bet. The reason they were one day out, was of course, because they had forgotten to reset the date when they crossed the date line.

The final course is over London, where you will head directly towards Greenwich Hospital, with Tower Bridge to your left and the Houses of Parliament to your right.

From – To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE (leg) HH+MM
	Dep. Rwy – 27	Init. Hdg – 136deg.	Init. Alt – 9,500ft	Apt Elev. – 82ft.			
Liverpool (EGGP) United Kingdom To London (EGLC) United Kingdom	Departure:						
	To WHI. Tune the ADF to WHI 368.5. After take off make a standard rate left turn to 136deg, start your climb towards 9,500ft and head towards the NDB.....				136deg	15.1NM	00+08
	Enroute:						
	To LIC. Turn left to 134deg, retune the ADF to LIC 545.0 and head towards the NDB.....				134deg	41.9NM	00+18
	To CT. Turn right to 156deg, retune the ADF to CT 363.5 and head towards the NDB.....				156deg	23.2NM	00+09
	To WCO. Turn right to 159deg, retune the ADF to WCO 335.0, head towards the NDB and start your descent to 3,000ft.....				159deg	37.2NM	00+14
	To CHT. Turn left to 135deg, retune the ADF to CHT 277.0 and head towards the NDB. Tune Nav1 to LON VOR/DME 113.60 and set the OBS to 088deg.....				135deg	21.5NM	00+08
	To Fix 03. Turn left to 120deg and follow the OB (300deg) bearing from CHT. Waypoint reached when the OBS needle centres. Fix 03 is located over the Reform Club in Pall Mall.....				120deg	15.7NM	00+07
	To LCY. Turn left to 098deg, retune the ADF to LCY 322.0, head towards the NDB and slow to 120kts. Tune Nav 1 to runway 28 ILS 111.15, and set the OBS to 278deg				098deg	7.5NM	00+04
	Approach:						
	To Fix 04. Continue on runway reciprocal 098deg and fly heading for 2mins 30secs.....				098deg	5.0NM	00+03
	To runway. Commence a procedure turn. Make a right 45deg turn to 143deg and fly Hdg for 1min. Make a left 180deg turn to 323deg. When you can see the runway turn left to runway Hdg 278deg for a visual or ILS approach. Note that the glide slope for London City aerodrome is a steep 5½ deg, which at 85kts, requires a descent rate of 825 FPM.....				Final Hdg 278deg	10.6NM	00+05
	Land – London City runway 28 Length – 3,922ft. Width – 98ft. Surface – Concrete						
Flight No. 813-02-80	Arrival Airport Elev. – 16ft.				Estimated totals for this flight>>>		177.7NM 01+16